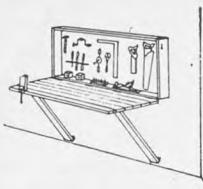


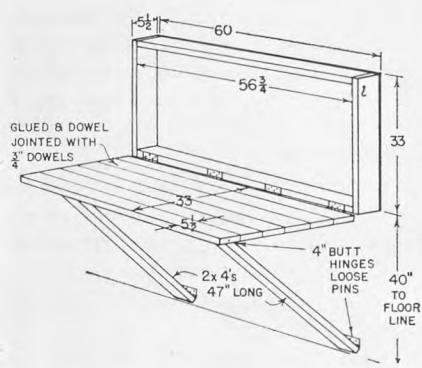
Make a Collapsible Bench

by C. RAYMOND



A WORKBENCH that can be folded when not in use is ideal for the handyman with limited working space, such as in a garage. Except for the braces and back, 2" by 6" lumber is used throughout.

First, make the frame. Mark the location of the four butt hinges. The two outside hinges are 2" in from the ends; the inside hinges are 19½" in from the ends. Recess the hinges. The frame is assembled with butt joints using glue and No. 10 wood screws, 2¾" long.



The bench is made by edge gluing and dowel jointing 6 pieces of 2 by 6's. Holes for the dowel pins are drilled ¾" in diameter and 2" deep. Mark the location of the hinges on the back edge of the bench.

The 2" by 4" braces are fastened with hinges to the base of the wall as shown. The hinges for the underside of the bench are installed in the reverse position to that shown for the base hinges. By removing the base hinge pins, the bench may be closed when not in use.

Attach the hooks and eyes on the frame and bench. A peg-board back may be added for ease in hanging tools.



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CHOCOLATE FUDGE CAKE

3 ounces (3 squares) unsweetened chocolate
 ½ cup water
 ½ cup granulated sugar
 7 tablespoons shortening
 1⅔ cups once-sifted pastry flour or 1½ cups once-sifted all-purpose flour
 2 teaspoons Magic Baking Powder
 ¼ teaspoon baking soda
 ½ teaspoon salt
 1¼ cups fine granulated sugar
 2/3 cup milk
 1 teaspoon vanilla
 2 unbeaten eggs
 Note: Have all ingredients at room temperature.

Put chocolate, water and ½ cup sugar in top of double boiler. Cook, over boiling water, stirring often, until blended; cool. Measure shortening into mixing bowl; sift flour, Magic Baking Powder, baking soda, salt and 1¼ cups

sugar together twice, then sift over shortening. Stir in milk until blended, then beat 300 strokes or 2 minutes by hand or with electric mixer at medium speed. Add vanilla, eggs and chocolate mixture; beat another 300 strokes or 2 minutes. Turn into greased 8-inch square cake pan, lined in the bottom with greased waxed paper. Bake in a rather slow oven, 325°, about 1 hour. Let cake stand in pan 10 minutes, then turn out on cake cooler and remove waxed paper. Frost cold cake.

Golden Frosting

Combine in top of double boiler, 1 unbeaten egg white, 1 cup lightly-packed brown sugar (preferably the old-fashioned dark type) and ¼ cup water. Place over boiling water and beat with a hand rotary beater or electric mixer until frosting stands in peaks. Remove from heat and beat in 1 teaspoon vanilla; continue to beat until frosting stands in peaks again. Swirl over top and sides of cold cake and smother the sides with broken pecans or other nuts.

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CANADA'S NATIONAL RURAL MONTHLY

In This Issue

- KNOW ANYTHING ABOUT IRRIGATION? You can read of some uses that Prairie farmers are making of it on pages 14 and 15, and you'll find a host of useful tips for handling water on pages 42, 43, 45 and 57.
- PAPER WORK NEED NOT BE DULL, when a man like George Hunt shows how it can be a moneymaker. His story is told by Don Baron on page 13.

CLASSIC STYLES AND FASHIONS, newly transferred from the designing board, were modeled at O.A.C.'s "College Royal" early this spring. Some of them are pictured on page 81.

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COVER: Those goats seem to appreciate the little girl's company. Another girl with some goats appears in the "High Summer" picture feature on page 17.—Luoma photo.

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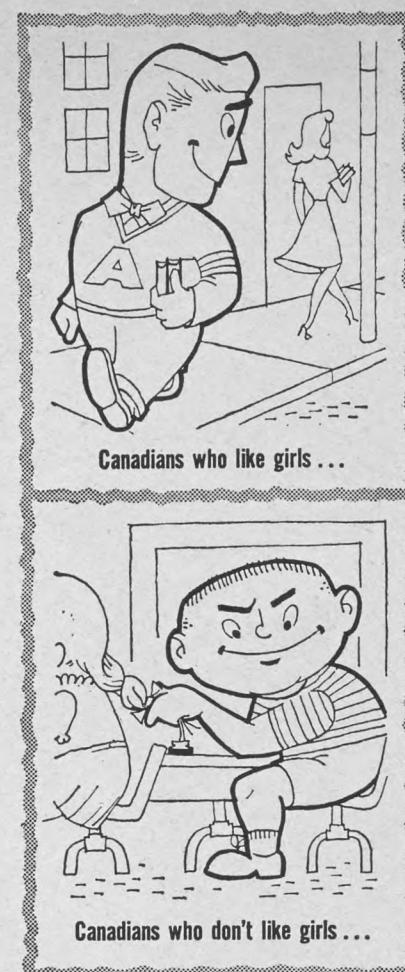
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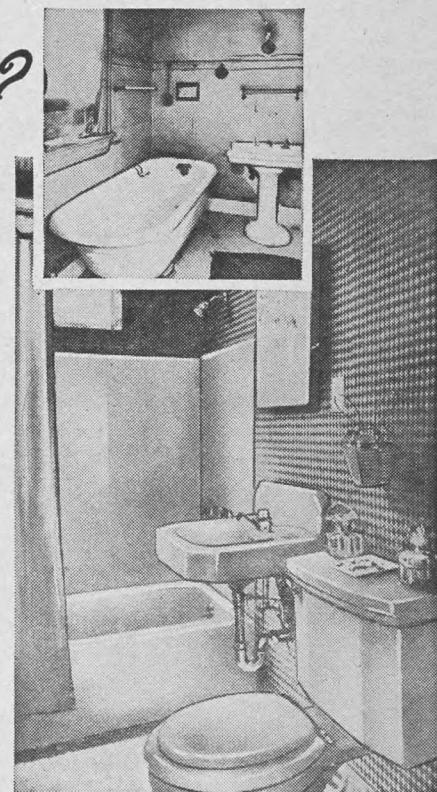
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Editorials

Water Under Control

THESE have been irrigation projects in Canada since 1890, and irrigation itself is thousands of years old. But in recent years, the canals and pipes have been reaching out across the Prairies beyond the traditional irrigated districts of Alberta. That province can now supply a million acres with water. There are 130,000 acres being irrigated in Saskatchewan. Small projects are springing up every year. The South Saskatchewan Dam is being built and could bring another half a million acres within reach of irrigation water. British Columbia, Manitoba, Ontario, Quebec and the Maritimes are all more or less involved in the trend. So it is important that we know what we are doing.

Irrigation has a great emotional appeal. It is easy to visualize parched earth and wilting crops revived magically by opening a dam or starting a pump. The semi-arid prairies could be growing more vegetables and fruits instead of needing to import most of them. A new pattern of farming and less uncertainty about moisture are powerful attractions, especially in the midst of an expanding population. But, unfortunately, irrigation is not just a simple, soothing dream of life-giving water. Unless we are strictly practical, it can do a good deal of harm.

Take, for example, the question of markets. We need to be reasonably certain that the extra things we can produce, whether they are beef or beans, will find a buyer. Also, the price received for the crop, in terms of increased production or higher value, must justify the added cost of irrigation. Transportation of produce to larger centers of population enters the economic picture too.

A certain amount, if not all, of the expense in setting up an irrigation project — such as building control structures, canals and storage — is met by the federal and provincial governments. But that does not let the farmer off the hook entirely. He has to provide equipment and some additional labor on his own farm. His operations will become more expensive.

Therefore, he must decide whether he stands to gain by irrigation, before the water starts to flow.

COST is not the only criterion. Land must be capable of improvement with the aid of irrigation, and suited to the crops planned for it. There must be an assurance that such conditions as salinity will not be made worse by applying water. The need for a careful study of soil was emphasized by a recent case, where deep borings showed that it would be unwise to irrigate some land that had appeared to be suitable. Testing and classification of soil can show also what land may be expected to produce and will give some idea of probable returns per acre.

Human resources are the kingpin of irrigation. Inexperience has tended to give irrigation a bad name. Errors in handling water have brought a load of trouble and inadequate returns. These setbacks can be avoided by providing education and technical assistance for irrigation farmers.

It is not our intention to paint a gloomy picture. On the contrary, there are at least two solid reasons for optimism. One was the Irrigation Forum held at Banff last fall, when a gathering of experts showed they were far from complacent about the purposes and problems of farming under irrigation. They revealed a vast store of experience, good and bad, to draw upon. They were also well aware of the need to combine all the technical services in planning and carrying out irrigation programs. The second reason for optimism is the striking success of irrigation in so many districts, both for specialized crops and livestock production. Some of these successes are featured in articles appearing on pages 14 and 15 of this issue.

No one can seriously doubt the wisdom of making the best use of water that is available. The important thing is to approach irrigation with open eyes and open minds, informed by research and investigation into the economic, engineering and agronomic aspects of it before the water starts to flow. ✓

cialist in the Department of Agricultural Economics at the University of Manitoba. Dr. Wood states that there are two major price problems in agriculture which are separate and distinct from each other and which call for quite different policy treatment if cures for them are to be achieved. The first price problem is instability or uncertainty, and the second is the persistent decline in the relative level of farm prices, commonly referred to as "the cost-price squeeze."

If it is admitted that Wheat Board marketing has resulted in reasonable price stability for grains, and we are inclined to think that it has, then the major price problem of the grain grower is the cost-price squeeze. Certainly this was the problem that was emphasized by the western farm organizations in making their requests for deficiency payments.

Now, let's follow Dr. Wood's reasoning a bit further. He asserts that, from a marketing standpoint, there are only two ways to halt the relative decline in farm prices, i.e., the cost-price squeeze. Either production must be controlled or the market must be expanded. But, with a world surplus of wheat of sizeable proportions, and with the United States stocks at more than 1.5 billion bushels and still increasing, production control in Canada seems to offer little chance of being effective in dealing with the cost-price squeeze. This, of course, leaves market expansion as the main alternative, and here again we are frequently told that there are definite limits to increasing our exports.

Certainly, in the light of the Government's policy statement and Dr. Wood's analysis of the cost-price squeeze, the outlook in the foreseeable future for grain farmers looks far from bright. The Government's policy is that of assisting the relatively small farmer on social grounds over a short-run period. This is commendable. But such a policy does little or nothing to alleviate the cost-price squeeze problem confronting a large number of reasonably efficient grain growers.

THE pertinent question is "what more is to be done?" We believe the time is ripe for some real soul searching on the part of all concerned with the western grain problem. In our judgment this calls for intensive and objective investigation and study, and a willingness to look for new solutions to the problem.

What about market expansion? Admittedly this is difficult, but are we doing everything that can be done to increase our grain sales? For the most part our wheat is an extremely high quality product with special milling qualities. Have we been exploiting this advantage to the utmost? We are informed that the United States has increased its sales force in Europe and opened offices in Japan, South and Central America. Farmers across the border are sending market specialists abroad to many countries to promote the use of United States wheat. What have we done to counteract such moves? Shouldn't Canada be doing likewise? And shouldn't we be setting aside funds annually to develop and use traveling bakeries, exhibits, advertising and other promotional devices to inform consumers abroad of the superior qualities of our wheat, and, thus, encourage sales in those countries to which Canada now sells little or no wheat and flour? The Wheat Board over the years has done a good job. But are the sales methods employed in the past good enough to maintain, let alone increase, our grain sales in the hard-selling and highly competitive market that exists today?

What about the effect of our general trade policies on wheat sales? The recent exchange of correspondence of the spokesman for the Prairie wheat pools and the United Grain Growers Limited, with the Prime Minister, over the Government's policy of so-called "voluntary quotas" with Japan indicates the dangers which confront our marketing efforts, since it is clear that pressures are being brought

Canadian Grain Policy

PRIME MINISTER DIEFENBAKER announced in the House of Commons last month that his Government has no intention of granting the requests of western farm organizations for deficiency payments on wheat, oats and barley. It is too bad he was unable to finish what he had to say on farm policy on that occasion so that a complete picture of the Government's intentions would now be known. However, Mr. Diefenbaker has promised to conclude his remarks as soon as discussion of the Department of Agriculture estimates resume. In the meantime, and in the light of what he has already said, there are a number of comments which seem to be pertinent.

The Government has now made it quite clear that any policy adopted to augment the incomes of western grain farmers during its term of office must be designed so the bulk of the assistance goes to those in greatest need, namely, the smaller farmers. This, the Government says, is the only policy which is socially defensible. The Government has indicated that there is a definite limit to the amount of money which Parliament can vote to western grain farmers. It obviously considers \$100 million or more a year, in the form of direct payments to farmers, as an excessive amount, particularly in view of the numerous other forms of assistance the Government has

adopted. Such payments, it believes, if made in the manner requested, would not be distributed equitably, would intensify the grain surplus problem, increase government storage costs, and shrink export markets for oats and barley.

After reaching these conclusions, the Government still concedes that certain grain farmers in Western Canada require assistance under the prevailing circumstances. It is prepared to listen to further proposals from farm organizations to meet the need, and seems to imply that it may even announce an assistance program of its own to alleviate distress conditions during the adjustment period between now and when its national farm program takes full effect. This, in brief, is essentially the Government's position.

TO us, at least, this appears to be a reasonable stand as far as it goes. However, it would seem that the Government doesn't see the problem confronting the western grain farmers as clearly as it might. In fact, the same could be said of many in the farm movement itself.

One of the most lucid and logical analyses of the prospects and limitations of farm price and marketing policies we have had the pleasure of reading begins on page 9 of this issue. It is by Professor A. W. Wood, marketing spe-

to bear upon the Government for protective policies which could curtail our exports of grain. A trade restriction policy imposed against our second best customer for wheat, and a good buyer of barley and oil seeds, can only be regarded as seriously damaging to the western grain economy. We need more than lip service to free trade and a stable economy. We need tariff reductions and competitive prices if other countries are going to buy our exports. And this applies to grain, which is still Canada's second largest export commodity.

What about production and resource adjustment? Are there too many land and human resources in grain production on the Prairies? How much can livestock production increase in Western Canada each year for the next 10 years and still keep the supply of livestock and livestock products in reasonable balance with effective demand at home and abroad? What amount of our land resources should be diverted from grain to livestock production, and how can such adjustment be facilitated? Will the development of the vegetable oil market proceed willy-nilly, or will we do something that is positive to bring about an orderly and steady increase in oil seed production and market expansion? We submit that farmers and governments need to pool their efforts in finding the answers to such questions with a view to improving the position of the western farmer.

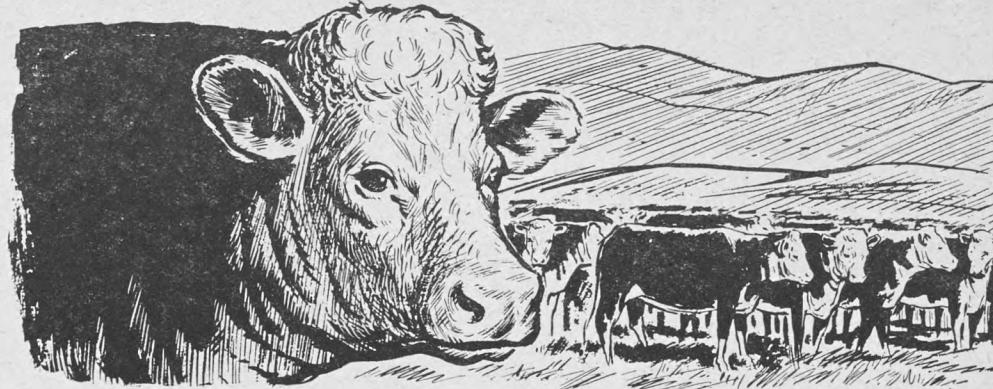
What about our quota and pricing system for grains? Could not the farmer be given a higher initial payment on wheat when he delivers his product? Wouldn't this do away with at least some of the need for interest free cash advances, which the Government has to finance? Is our present quota system the best that can be devised? Or shouldn't we in Canada be taking a close look at the market certificate plan which is being advocated in the United States? Such a plan seems to be less confining, and might permit necessary adjustments to take place more freely than a quota system.

IT is obvious that we do not think that all the avenues for improving the prospects and position of the western grain farmer have been fully explored. We would still like to see a group of farm and government leaders and experts, agricultural economists, marketing specialists and representatives of the grain trade brought together to answer to the best of their combined ability the question: "What more is to be done?" And while it must be recognized that such a group cannot quickly or easily bring forward a complete solution, it should be able to decide on those steps which are practical for implementation immediately, and on others which will require more investigation before action can be taken. Such a group might become a continuing advisory body on Canadian grain policy.

We haven't our heads in the clouds. We know the road ahead is a rocky one. But we would like to think that there is still courage and initiative enough in Western Canada to overcome the problem of the cost-price squeeze, and to prove that the grain industry is still one of Canada's greatest assets.

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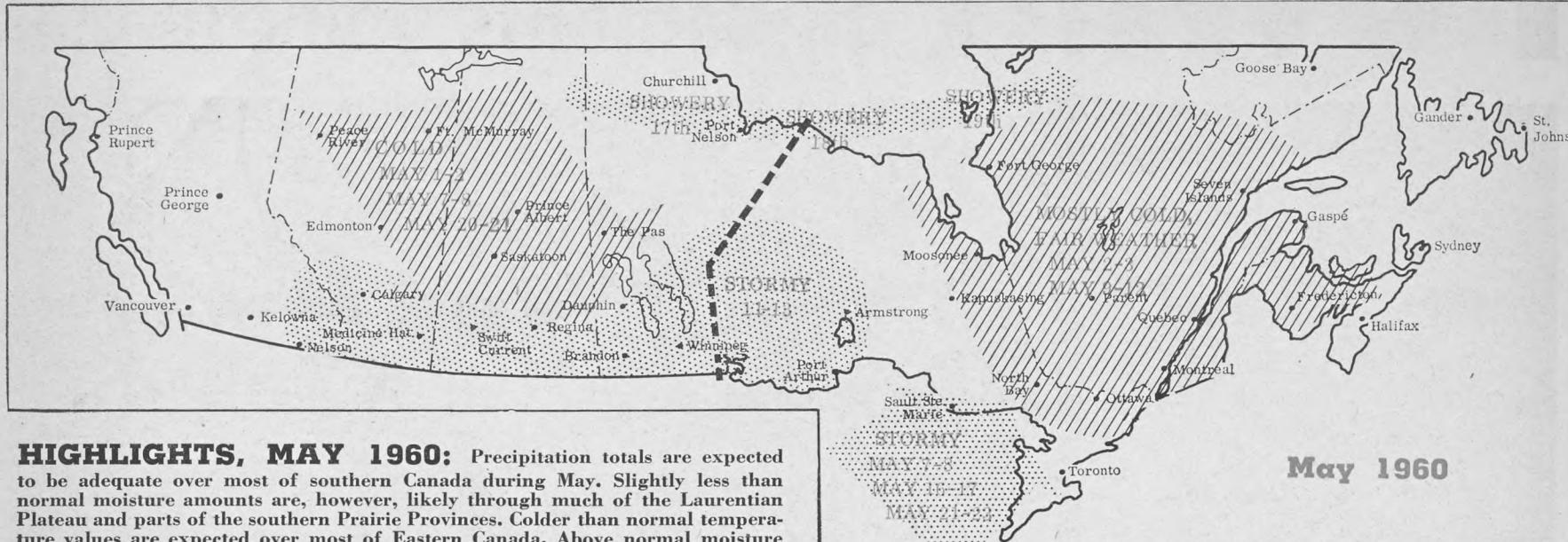
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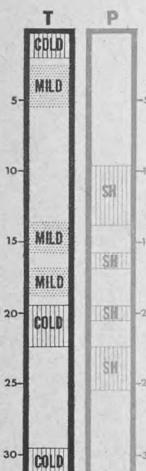
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HIGHLIGHTS, MAY 1960: Precipitation totals are expected to be adequate over most of southern Canada during May. Slightly less than normal moisture amounts are, however, likely through much of the Laurentian Plateau and parts of the southern Prairie Provinces. Colder than normal temperature values are expected over most of Eastern Canada. Above normal moisture amounts are likely principally in the extreme northern sections of Prairie Provinces. The month promises to be quite active weather-wise in Canada this May.

(Allow a day or two either way in using this forecast. It should be 75 per cent right for your area, but not necessarily for your farm.—ed.)

Alberta



1st week 1-7: Temperatures, although colder near first day or so, should turn mild a few days near the middle of week. It will be windy near 6th with temperatures turning colder toward week end.

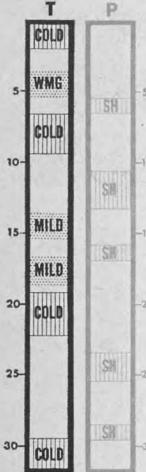
2nd week 8-14: Weather is expected to be unsettled from 10th to 13th. Daytime temperatures will be cool for the most part and then they will be turning milder near the end of the week.

3rd week 15-21: A few light showers are expected around the 16th and 17th, and 20th. Temperatures are expected to be mild through most of the week but it should be much colder over the week end.

4th week 22-28: Colder than normal temperatures are expected at the beginning of this period. These should give way to milder values through balance of week. Showers likely on 2 or 3 days at middle of week.

5th week 29-31: Colder temperatures are forecast for the end of the month.

Saskatchewan



1st week 1-7: Colder than normal the first day or so of May, with warming by mid-week. Showers are likely near the week end, followed by cooler temperatures into the first couple of days of the next week.

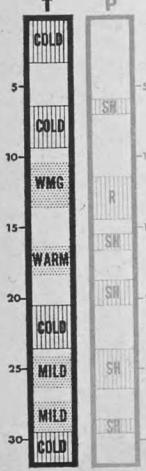
2nd week 8-14: There is a good chance that mid-week storminess will be occurring during this period, with temperatures expected to turn milder on the last 2 days of the week.

3rd week 15-21: Mild temperature values dominate a good part of this week's weather but turning colder near week end. Brief showers should make an appearance on 16th-17th. Look for gusty winds on 20th.

4th week 22-28: The indications are that showers can be expected to occur around the 24th and 25th, and after this the temperatures will probably return again to lower levels.

5th week 29-31: Showers are likely about the 29th, followed by below seasonal temperatures.

Manitoba



1st week 1-7: The first part of the week should find temperatures somewhat colder than usual. Showers are due near the week end, although threatening skies also are likely around the 4th.

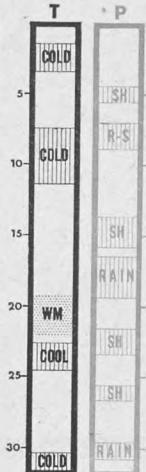
2nd week 8-14: The first feature of the week should be some warming, which will precede the precipitation activity expected in the province through most of the latter part of the week.

3rd week 15-21: A warming period appears to be likely for a day or so around the first half of the week, but following this the temperatures will be lower again by the week end.

4th week 22-28: Mild periods are expected near mid-week and at week end, although the period should begin on a somewhat colder than normal note. Shower periods 24th-26th offer the prospect of fair moisture.

5th week 29-31: Colder than normal temperatures are expected to dominate this final period.

Ontario



1st week 1-7: Threatening skies are likely on the 1st of the month. Showers are due on the 5th with more important precipitation due around the 7th. Temperatures will be below normal.

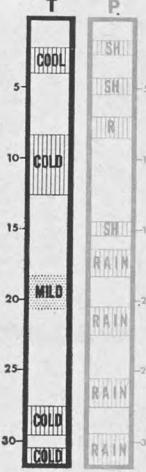
2nd week 8-14: Most of this period should be relatively storm-free. Colder than normal temperatures are expected during the first half, warming the latter half. Moisture likely during the first day or so and near the end.

3rd week 15-21: The period as a whole should be characterized by predominantly unsettled and stormy conditions. However, some warming temperatures are indicated near the end of this third week.

4th week 22-28: Cool values on a few days at the beginning of the week should be replaced by milder readings at mid-week. Light showers are likely near the first of the period and again near the 26th.

5th week 29-31: Stormy conditions are expected around the 30th, followed by colder temperatures.

Quebec



1st week 1-7: Weather will be mild on first day with showers moving in near 2nd followed by some cooling. More showers are due near mid-week. Rising temperatures can be expected around 6th.

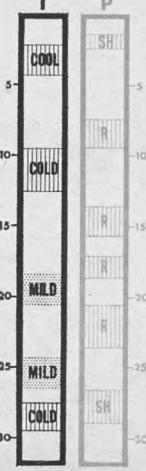
2nd week 8-14: A change in the weather will mean most of the week should be colder than normal. The first couple of days of the week are expected to produce some storms.

3rd week 15-21: With yet another change, somewhat milder readings are indicated for this week. In spite of this, stormy weather will be the dominant feature during this interval.

4th week 22-28: Aside from cold temperatures near week end and cool readings near the 22nd, balance of week should have mild to near normal temperatures. Good chance of moisture about 22nd, 26th and 27th.

5th week 29-31: Cold and wet weather is the forecast at month's end in Quebec.

Atlantic Provinces



1st week 1-7: Brief showers are indicated near the first of the week, with mild temperatures preceding them and some cooler values expected to follow for a couple of days in this period.

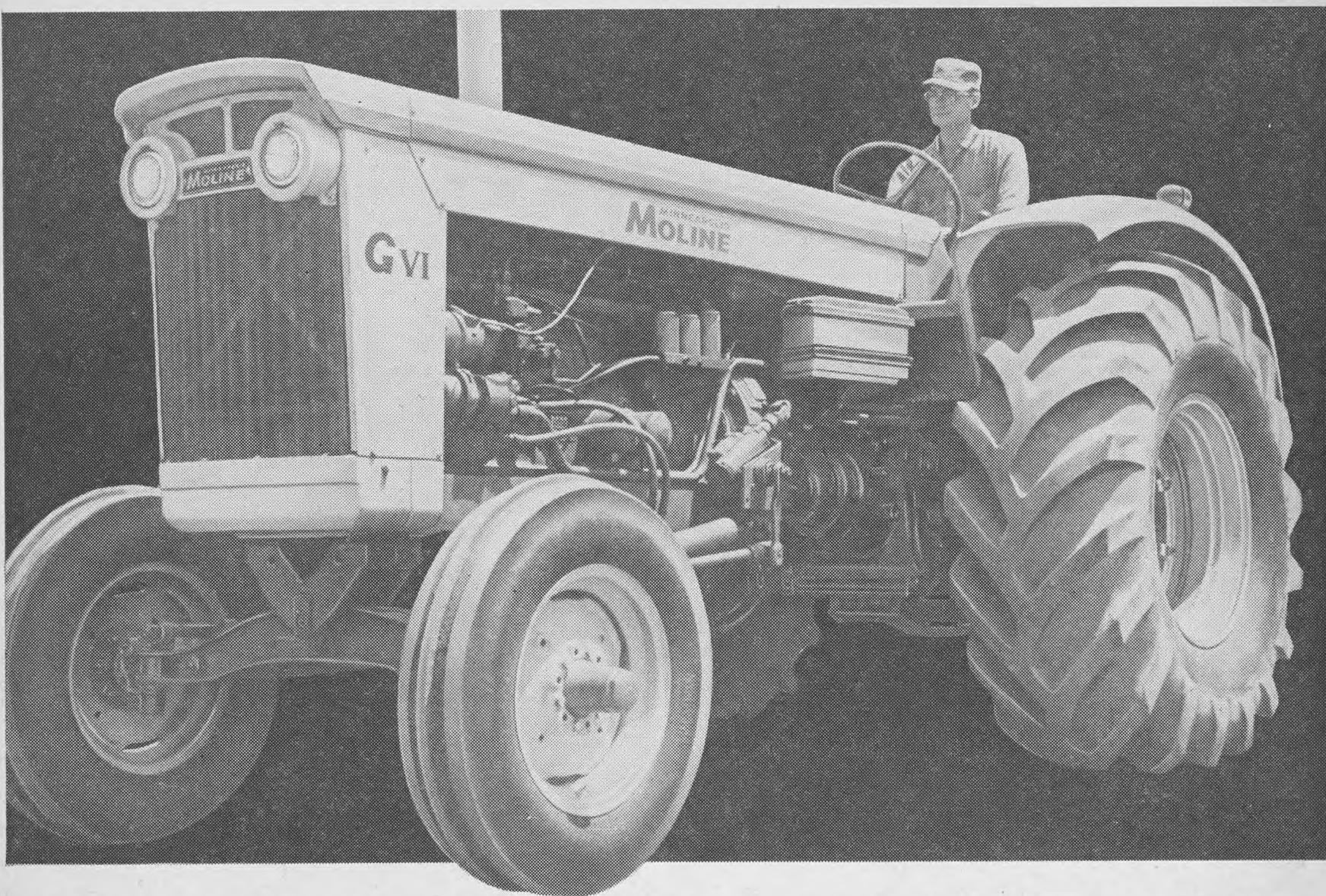
2nd week 8-14: Cold temperatures are anticipated for several days at mid-week. Moisture amounts are expected to be important near the first of the week and again near the week end.

3rd week 15-21: The forecast is for precipitation to occur frequently during the week. At the same time, mild temperature readings are expected to prevail through the period to the 21st.

4th week 22-28: Moderate to heavy sky cover should predominate in the beginning of the week. Showers and colder temperature values are expected to be the main weather features near 22nd, 23rd and 27th, 28th.

5th week 29-31: Cold temperature values are expected into the first of the week, moderating by month's end. ✓

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What's Happening

INTENDED ACREAGES OF FIELD CROPS FOR '60

DBS reports that on the basis of their intentions at March 1, Canadian farmers plan no change in all wheat acreage in 1960. Acreage increases with percentage change in brackets, are indicated for oats for grain (3); flaxseed (20); mixed grain (2); corn for grain (3); soybeans (3); pota-

toes (2); and rapeseed (161). These intended acreage increases are offset in part by prospective decreases in the acreage to be sown to barley (down 4 per cent); all rye (down 4 per cent) and 1 per cent decrease in summerfallow acreage.

The largest individual change in the use of Canadian crop land in 1960 is the intended increase of 472,800 acres in flaxseed, followed by

rapeseed which may increase by 350,400 acres, and oats for grain with a probable increase of 349,100 acres. The largest reductions in prospect are 319,900 acres for barley and 310,000 in the acreage devoted to summerfallow.

The report emphasizes that the figures represent farmers' plans at March 1. The acres actually seeded may vary considerably from the intentions reported, depending on conditions before and during seeding, the market outlook, the availability of good quality seed, and contractual arrangements for some crops. ✓

WESTERN DEVELOPMENT MUSEUM WANTS BINDER

The Western Development Museum wants a binder. Not any kind of binder, but a wire tying binder. Officials say it is the only missing link in the Museum's array of harvesting equipment which will be on display at the 1960 Pion-Era show to be held July 4-9. Anyone knowing the whereabouts of a wire tying binder is asked to contact the Western Development Museum, Saskatoon, at once. ✓

ANTIBODY FORTIFIED MILK ANSWER TO DISEASE

Milk, already recognized as nature's most nearly perfect food, may, within the next 20 years, play a vital role in combating human disease, Dr. W. E. Peterson of the University of Minnesota, told Manitoba dairymen recently.

Dr. Peterson explained that milk can now be produced which contains antibodies against many diseases. Such "antibody milk" is obtained by injecting disease-causing bacteria and viruses into the cow's udder. The udder is an independent organ as far as production of antibodies is concerned. It apparently can produce antibodies against almost all bacteria and many viruses and a wide range of substances known to cause allergies. Once the udder is injected with these organisms or substances, the cow will go on producing antibodies against them for the rest of her life.

A patient has only to drink less than a pint of "antibody milk" each day, providing he does so quickly. If the milk is ingested slowly, the diges-

tive enzymes in the stomach would break down the antibodies it contained. The enzymes are highly acid and work only in acid conditions. Milk is one of the best buffer solutions in nature and when taken into the stomach quickly offsets the acid balance. The antibodies are then absorbed into the blood stream through the walls of the stomach and the small intestine, the speaker explained. This discovery cancels one of the most widely accepted principles—that antibodies cannot be absorbed into the blood stream through the digestive tract.

Dr. Peterson and his co-workers have produced "antibody milk" against 100 bacterial diseases of humans, diseases of other animals such as calf scours, and against such virus diseases as influenza type A and polio. Forms of rheumatic arthritis have also been controlled. According to Dr. Peterson, over 80 per cent of almost 2,800 correctly diagnosed arthritic rheumatoids have responded favorably to milk containing the proper antibodies. ✓

ONTARIO INTRODUCES CONTROVERSIAL BILL

The Ontario Government has introduced Bill 86 before the provincial legislature for the purpose of amending the Farm Products Marketing Act. The Bill provides for absolute control over farmer marketing boards and agencies, either by direct authority of the Lieutenant-Governor-in-Council, or through the Government's appointed Board—the Ontario Farm Products Marketing Board.

The amendments contained in the Bill, if they are passed, would provide authority for the Government to intervene and to carry out the powers and take over the assets of any marketing agency. Such power already exists under the provisions of the Farm Products Marketing Act with respect to farm marketing boards.

The amendments give the Farm Products Marketing (government) Board power to exercise supervision over the purposes for which farm marketing plans are being operated, control the service charges of the local board's marketing agency, and to vary any purpose of a plan which the Farm Products Marketing Board deems advisable.

(Please turn to page 100)



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with ground-line gathering chains

Wide-sweep gathering points on the Gehl 1-row Chop-All get every stalk—even down, tangled, and goosenecked. Ground-line gathering chains grip the stalks for clean sweep of the row, then roll them butt first into the power-driven compression rollers.

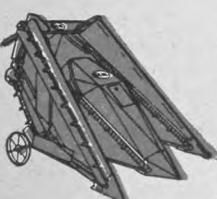
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[Jim Rose photo]

Is There a Royal Road to Parity?

A crystal-clear analysis of the prospects and limitations of farm price and marketing policies

MARKETING and price policy for Canadian agriculture is in a profound state of confusion. Political parties and farm organizations alike seem to be seeking the solution to the problem of depressed farm prices and low farm incomes, but they cannot agree on the price and marketing policies which would offer the best prospect of overcoming the difficulties. Among the policies advocated are deficiency payments, marketing boards, 2-price systems, flexible price supports, and high and rigid price supports on a limited volume of output per farmer.

These policies have all been tried before in one country or another and several of them have been used in Canada. Some are still being used but are under general attack for their failure to solve farm price problems. In the last 8 years farm prices have fallen by 20 per cent while the prices farmers pay have risen 16 per cent. Some farm prices fluctuate widely within the year and from one year to the next. Government policies designed to solve these problems have not been completely successful. Some have been moderately successful, but have recently begun to run into trouble.

In the last year or two the storage stocks of wheat, eggs, pork and dried skim milk have reached such extreme levels that, in the case of eggs and hogs, purchase programs have been abandoned in favor of deficiency payments and, in the case of dried skim milk, price supports have been removed entirely. After the change to deficiency payments, egg prices skidded to a 25-year low and now show indications of rising within a few months to unusually high levels. Hog prices may take a similar roller coaster ride. Yet the support programs were designed to stabilize farm prices!

effectiveness in achieving the stated objectives.

There are two major price problems in agriculture which are separate and distinct from each other. One is price uncertainty or instability and the other is the persistent decline in the relative level of farm prices, popularly known as the "cost-price squeeze." The causes of these two problems are quite different and their cures call for quite different policy treatments. A policy designed to solve one may actually aggravate the other.

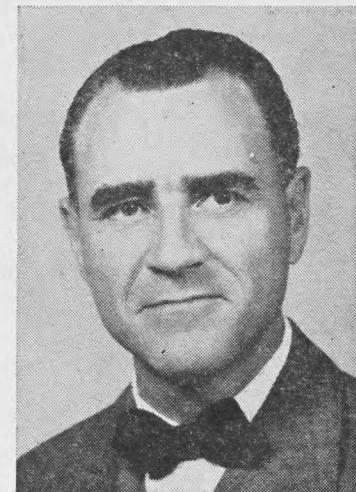
Price Stabilization

THE problem of price uncertainty and instability is the simpler of the two. It should be clearly distinguished from long-run price increases such as occurred between 1939 and 1951, and

Dr. Wood says:

- ✓ Two major farm problems are price instability and persistent price declines — the cost-price squeeze.
- ✓ Price stabilization methods, such as storage and deficiency payments, can effectively stabilize prices, but cannot cure the cost-price squeeze.
- ✓ Neither method can hold farm prices indefinitely above free market prices.
- ✓ The cost-price squeeze is not the result of a temporary or minor imbalance in the farm economy. There are only two ways of halting it: (1) By controlling production, or (2) by expanding the market. Both ways involve serious costs which must be weighed carefully against their potential benefits.

by A. W. WOOD



Dr. Wood, who specializes and lectures in agricultural marketing, is a professor in the Department of Agricultural Economics, University of Manitoba.



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THE present state of confusion in price policy calls for a careful diagnosis of farm price problems. This requires, first, an examination of the nature and causes of the problems. Before an appropriate policy cure can be prescribed, it is necessary that the objectives of policy be decided and clearly stated. Alternative policies can then be drawn up which are designed specifically to meet these objectives. Finally, farm producers and the rest of society must choose the most acceptable policy in terms of its economic, social, moral and political costs, and in the light of its probable

This article was condensed by Dr. Wood from an address he delivered in March to the University of Manitoba Conference Week for farmers and homemakers. The address was entitled "Major Choices in Marketing Policy."

persistent price declines of the kind we have experienced since 1951. Price instability refers to irregular price changes, both up and down, within the year and from one year to the next. If prices changed gradually and steadily, either upward or downward, they would not, in this definition, be considered unstable. Price stabilization would smooth out these irregularities and uncertainties in the same manner as the removal of bumps and the filling of chuck-holes on the highways greatly improves the ride, even though it doesn't level out the longer hills and valleys.

Prices can be stabilized without making them rigid. They can be allowed to change gradually and steadily in a manner announced in advance and uncertainty can thereby be largely eliminated. This gradual change may be upward or downward. If it is persistently downward the second problem of the cost-price squeeze arises

(Please turn to page 96)



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KEEP WHEAT MOVING to market as elevators will be crammed again this year even if quotas are increased. Export markets for Canadian wheat, apart from durum, are sluggish. Other major exporters are doing quite well this season.

U.S. SUPPORT LEVELS (except for wheat) are a good guide to minimum prices we may expect in Canada. Most U.S. levels are down to what we would consider competitive, i.e. corn \$1.06, oats 50 cents, barley 77 cents, rye 90 cents, flaxseed \$2.38 and soybeans \$1.85 per bushel. The wheat rate is still high at \$1.77.

CATTLE PRICE weakness can be expected with large cattle numbers on hand. This in turn will encourage beef-hungry consumers to eat more. Fed cattle prices have held up well, reflecting a bulge in U.S. demand.

FLAX ACREAGE will increase by 20 per cent if farmers carry out their March 1 intentions. Don't count on getting last fall's prices this fall. Even at lower prices the crop will provide ready cash.

WHEAT ACREAGE will likely be about the same as last year. A yield of 19 bushels at this acreage can be absorbed, as commercial markets are large enough to handle about 16 bushels per acre and in addition, another 3 bushels per seeded acre can be used on the farm.

PORK-WEARY CONSUMERS are not inclined to respond to lower pig prices this year after last year's all-out effort. Hog markets continue weak.

BARLEY ACREAGE may be down a bit. Exports this season have been disappointing to date, reflecting the relatively high price in comparison to U.S. feed grain offerings. This pressure will likely continue for a number of years so Canadian prices may have to be reduced.

RAPESEED ACREAGE may bounce up $2\frac{1}{2}$ times above last year's levels. There should be no trouble marketing this size crop, but prices will likely be lower than a year ago.

MORE LAND or more intense use of existing land? With high interest rates on borrowed capital you may find it cheaper to increase output per acre by using more fertilizer, for example, than by adding more land.

OATS MARKET is still largely domestic, but farmers intend to increase acreage slightly as prudent insurance for feed reserves for heavy livestock program.

PRODUCERS' SHARE of consumers' food dollar, as well as food share of consumers' total spending, will likely shrink a little more this year. This combination will put some downward pressure on farm prices.

What Farm Organizations Are Doing

OFA WANTS FEED FREIGHT HELP EXTENDED

The Ontario Federation of Agriculture, in a brief presented to the Royal Commission on Transportation, recommended that a feed freight assistance policy be extended on all shipments of Ontario wheat and corn so as to place both Ontario and western grains on a competitive basis.

The OFA pointed out that the problem facing Ontario wheat and corn producers is that the cost of freight on their grain makes it prohibitive for farmers east of Montreal to buy it in competition with western grain.

To illustrate the problem the brief noted that the cost of shipping one ton of feed barley from the Lakehead to Saint John, N.B., is \$21.60. The feed freight assistance allowed on this ton is \$14.90, which means the Federal Government is paying \$14.90 of the total freight bill of \$21.60. But the freight cost on Ontario-produced feed grains, moved by rail from Walkerville near Windsor to Saint John, is \$21.00. Since the Federal Government pays no subsidy on Ontario grain, \$21.00 is the net freight cost to the purchaser in Saint John. The result is a cost difference of \$14.30 per ton on freight between western feed grain and Ontario feed grain.

The brief also dealt with other questions of transportation which created problems for Ontario farmers. It charged that the railroads are either unable or reluctant to decide speedily enough on applications for agreed charges as well as other rate adjustments. The OFA said they would like even a negative reply, if necessary, in order to allow shippers to find other ways to move their perishable commodities quickly.

The brief called for close and sympathetic study of the following: reclassification of commodities like soybeans and white (dried) beans for rate setting purposes; the establishment of an independent authority to expedite action on requests for rate adjustment; and, a reduction in the waiting period on agreed charges from 20 to 3 days. The Commission was also asked to investigate the regulations governing the interprovincial movement of trucks, especially with regard to licensing, and to consider the reduction of demurrage charges on grain.

NEXT MOVE UP TO GOVERNMENT

Representatives of nine western farm organizations met in Regina, March 12, to consider their position in the face of Prime Minister Diefenbaker's announcement that the Federal Government would not make deficiency payments on grain as requested by the 1,000-member delegation which went to Ottawa in March 1959.

The meeting made it clear that since the basic cost-price squeeze problem which had been presented by the delegation had deteriorated

during the past year, the need for additional farm income was more pressing than ever.

The meeting agreed to:

1. Meet the Government immediately to discuss any proposals for assistance to meet the problem which it might wish to put forward.

2. Refrain from making further suggestions about the form which the necessary assistance should take so as not to impede any plans the Government may be considering.

CFA MOVES ON RAPE, CHEMICALS AND DRUGS

The Canadian Federation of Agriculture made the following special representations in March:

• To the Board of Transport Commissioners respecting freight rates on rapeseed.

• To the Tariff Board respecting its general inquiry into chemical tariffs.

• To Justice Minister Fulton respecting the cost of drugs.

In addressing the Board of Transport Commissioners, CFA President H. H. Hannam said the organization wished to add its voice to those supporting the application of the Bogoch Seed Company Limited to the effect that rapeseed be treated as a grain for rate purposes.

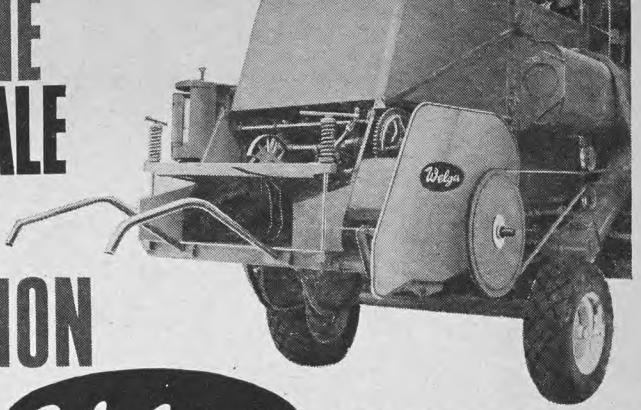
The charge of a very much higher rate on rapeseed than for flaxseed or other grains, Dr. Hannam said, appears to the Federation to be an unreasonable distortion of the rate pattern. It serves to limit opportunities for growing rapeseed in Western Canada, at a time when markets and prices for other grains make such an adjustment altogether desirable in the national interest.

In representations to the Tariff Board, the Federation stressed the increasing important role that chemicals of many different kinds now play in the production of fertilizers, feed, fibre, ornamentals, tobacco, and plants, livestock and poultry food products. It warned that the imposition of duties on chemicals which are of special interest to farmers would be unwise, unreasonable and uneconomic. It further stated, in view of Canada's vital dependence on trade, that there should be a strong and general presumption against tariff increases, or any actions to allow industries to expand on the basis of such increases.

In dealing with the investigation on the cost of new drugs, now being carried out by the Director of Investigation and Research of the Combines Act, the Federation drew special attention to the resolution adopted at the organization's annual meeting on this subject. It suggested that publication of a study on the cost of new drugs, important and urgent as this was, might well be followed by further investigation and report into drug pricing and drug costs on a much wider basis.

(Please turn to page 100)

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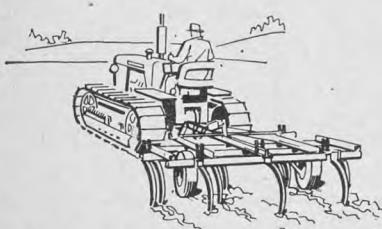


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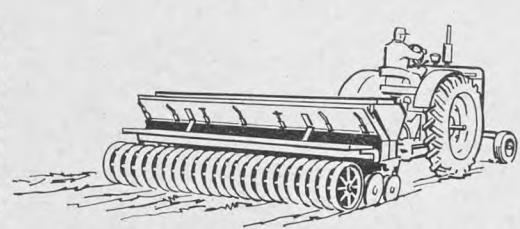
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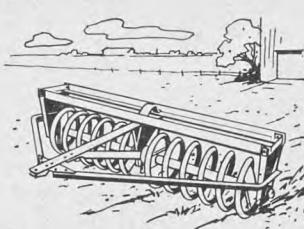
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McCormick No. 100 Press Drill. This drill (and companion model No. 10) is the result of 5 years IH research and testing. Features biggest seed hopper on the market; wide throat feed cups with sintered-metal fluted rolls that won't rust; exclusive new hinged-bottom fertilizer hopper that can be cleaned out in minutes. Weight of the drill is carried on 20-inch press wheels which pack soil around each seed.



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**According to a
growing group of
Ontario farmers
who use a new
management service offered by George Hunt-**



[Guide photos]

George Hunt (left) talks things over with Dane Learn and his wife. He advised Dane and his brother Buford to establish a sound legal partnership.

Below: Jack Stuyt had Hunt's help in planning reorganization of areas for dry sows, farrowing and nursing sows. Remodeling an old stable cost \$200.



Farm Profits Begin on Paper

by DON BARON

IT'S the management decisions that make the difference," says Tillsonburg farmer Don Lowrie, "not what you do on the tractor seat or in the cow stable. Grow hay when you should be growing corn silage, and it can cost you money. Build a pig pen that is already obsolete, and you're beat before you start."

And to help make sure that his own decisions are sound, Lowrie has turned to someone with specialized training and experience — a farm management consultant.

In hiring George Hunt, Lowrie is taking an unorthodox approach to farming. "Why not?" he asks. "These are unorthodox times."

Hunt is a young man with a boundless confidence in the future of farming, and intense impatience with the sacredness of tradition. He spends just about every waking hour thinking, talking and planning ways to cut costs on the farms he manages. He will drive 500 miles in a day to see a new pig pen or cattle shed, or talk over a new idea with an expert.

As he drives down the highway on his rounds, all the while he is jotting down on a pad that is always by his side the thoughts and ideas that occur to him.

"Farming is no longer an art," he explains. "It's a science. The stakes are too high to go along blindly from day to day. You've got to be sure your program is sound. For instance, there is no use growing the best pasture in your community if you'd make more money growing corn silage, or turning the farm to hens, or quitting the farm altogether."

In fact, in his view, the starting point for any farm program is on paper. If you want to borrow



Don Lowrie (r.) got a picker-sheller and dryer on Hunt's advice, and now stores corn in bins.

money from the bank, and be reasonably sure of being able to pay it back, you need a sound, long-term program. You've got to figure it out on paper, in advance.

Call it a new approach to farming if you like. It shows the first time Hunt is called to a farm. He doesn't head for the barn or the fields to see the cattle or crops. He heads straight for the house, and begins to set out the income and expense records.

"That balance sheet will show better than anything else what shape a farm is in," he explains. "I have seen farms that looked prosperous at first glance, but major changes were needed to put them onto a profit basis."

IN setting out the balance sheet, Hunt finds out how much the enterprise is worth, how much credit is involved, both short-term and long-term. He finds whether too much of the working capital is in fixed assets like land, buildings, machinery; too little in dollar-earning liquid assets like cows or pigs or fertilizer or feed. He finds if a man is really machinery poor, if enough milk or beef or hogs or eggs are being sold to justify the number of workers. In short, the records show how the farm business is organized. "The balance sheet is the most basic thing on the farm," he says. It enables him to arrive at the very key to profits—the output per man, or the farm's labor efficiency.

"I have seen one man handle 700 beef cows himself," says Hunt. "How can a man make money with only 15 or 20 of them?"

If a farm's output per man is too low, one of the first steps must be to plan improvements. And this reveals another side of Hunt's nature. For he is anything but a scientific fellow who can't tell a Holstein from a Hereford, or rhinitis from anemia. In fact, he was brought up on a farm and graduated from the Ontario Agricultural College after a wartime stint in the Merchant Navy. In the decade since then, he has worked as a farm economist for the Ontario Department of Agriculture, then as a feed salesman, and later as a manager of a feed mill in the province. He squeezed in a year working for the biggest farm management organization in the United States. A year ago, he figured he was finally ready to offer a management service to Ontario farmers.

AS a sideline, he set up a 75-sow swine enterprise, of which he is half-owner and of course, manager too. That unit itself is a model of Hunt's own thinking. The entire herd is housed in an old rented barn that was remodeled as an up-to-date shelter and farrowing house.

Out-of-pocket costs of the job were \$200. And the finished house is streamlined enough that one man can easily do all the work, and successful enough that the sows are weaning over 9 pigs per litter.

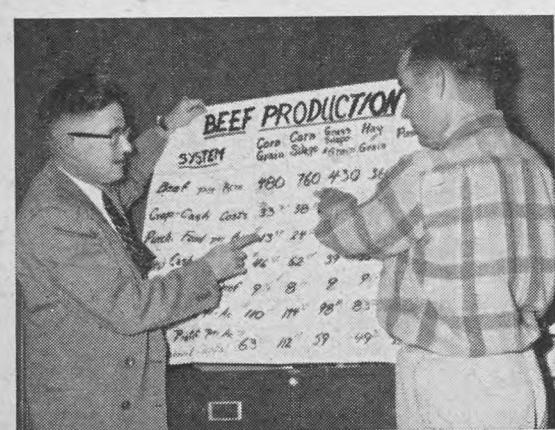
Hunt's trained eyes can just about read the story of any farm, in its financial statement. The records reveal to him whether a man needs more land, and whether he has the assets to buy it. He can see if the farmer should install more labor-saving equipment to boost labor output, or if he needs a new fertilizing and cropping program to boost yields. He can determine if the credit program is sound, with short-term credit used for dollar-earning purposes like feed or fertilizers, or the purchase of livestock.

Against this background, Hunt can talk over with the owner his long-term plans for the farm. And begin the job of planning to meet the goals of the farm family.

Here, Hunt shoves his slide rule back into the pockets of his neatly pressed trousers, pulls his overshoes out of the car and begins prowling the farm fields and woods, the stables and barns, and turning over in his mind possible ways to meet these goals.

This is almost an exercise in juggling. For he must take the three ingredients of any farm program—land, labor and money—and combine them in such a way to make the biggest profit possible.

(Please turn to page 61)



George Hunt (r.) tells our eastern field editor, Don Baron, about corn silage as feed for steers.



The articles on these two pages deal primarily with water for land. Another use was discussed in "Water Makes a Town Grow" (July 1959). Water systems for farm and home will be the subjects for features later on this year.

Irrigated Pastures— Key to Meat Production

Malcolm Locke (right), on whose farm the experiments took place, and Bill Herring, the PFRA farm supervisor.

by CLIFF FAULKNER



[Guide photos]

You can turn this into this with irrigation

*But it won't pay to put water on pastures
unless you can turn your increased yields into cash*

YOU'RE new at this irrigation game. In fact, you're not too sure you wanted all this water in the first place, or how you're going to pay for it. But somebody built a dam nearby and you find yourself in an irrigation district.

One thing you are sure of. You don't want to start raising row crops, such as sugar beets, corn or peas. You've been a grain man all your farming life. Yet you don't want to put water on your grain fields either. You just wouldn't know what to do with all that extra production.

How about growing grass? Grass is good for the land. You can really make 'er grow too, if you put on water and fertilizer. But can you make it pay, that's the question.

According to PFRA's Bill Herring, who's stationed at Hays, Alta., this will depend on what you do with your grass once you've got it. If you manage it right, it can return you up to \$90 an acre. But it sure won't pay if you use the grass just to exercise your animals in. They might do well, but you won't. To make that irrigated pasture pay you've got to raise all the grass you can per acre, then turn it into meat.

IN 1958, Bill set out to find just how much beef could be raised on the grass produced by 17 acres of irrigated pasture. Because natural grazing means a good deal of feed lost through trampling, selection and manure contamination, he decided to harvest the grass-legume mixture mechanically and feed it to the animals in a feedlot. Fifty yearling steers were chosen for this test, one-third of them receiving Stilbestrol implants, a third Synovex-S implants and the remainder receiving no implants.

The steers were fed all the fresh-cut green feed they could eat, twice a day. It averaged out to

about 80 pounds of green feed per head. Because of poor growing weather in June, for 2 weeks a small part of each load was made up of green oats from a nearby field. The oats used amounted to half an acre of the regular green feed, thus raising the 17-acre test plot to 17½ acres.

"It's interesting to note that the cattle preferred the grass chop," said Bill Herring. "They'd leave the green oat chop untouched unless it was well mixed with grass. No grain was given these steers; salt and bonemeal were fed free choice. A small amount of aureomycin pellets were given the first 2 weeks until the animals got used to their feed and surroundings. We had very little sickness during the whole 114-day feed period, and no trouble with bloat."

THE experiment was held on the farm of Malcolm Locke, a V.L.A. farmer at Hays. Work on the pasture began in July 1957. The field was leveled and border dikes constructed with a V-type ridger. This was seeded to a mixture of brome, orchard, reed canary, creeping red fescue, white Dutch clover and Alsike clover. A 70' by 120' feedlot was built, with fenceline feedbunks about 16" deep and 20" wide.

"Because of dry conditions at the time, the grass didn't germinate until the first week of August," Herring said. "We tried to irrigate but had to stop because of severe washing. To cure this, we seeded a 30-foot wide strip of oats across the top of the field just below the supply ditch to slow down and spread the water. This worked well, and the pasture went into the winter with 1½ to 2 inches of growth."

The pasture was cut five times and irrigated six times in a season (3 inches per application). One half was cut while the other half was irri-

gated. To make a complete cut took from 2 to 3 weeks. Fertilizer treatment consisted of a single application of 400 lb. of ammonium nitrate in June, and 100 to 200 lb. of 11-48-0 put on in June, July and August.

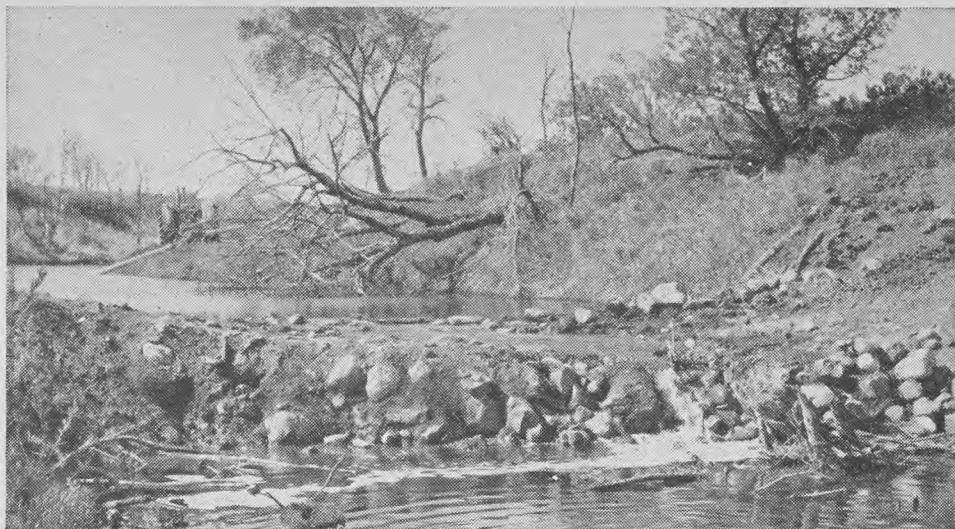
"Keeping a feedlot clean in summer is a special problem when the cattle are on fresh green feed," Bill Herring pointed out. "In 1958, we spread straw over the whole area, using about 25 bales per animal. But, by the end of the feeding period the lot was in a pretty mucky condition. Last year, we concentrated our straw in the shade area at one end of the lot. This worked better. The yield of manure was less, but the feedlot and cattle were much cleaner. We also used less straw—about 10 bales per animal or 500 bales altogether."

IN 1959, the test steers received their final weighing on September 18, and were removed from the feedlot. The control group averaged 2.62 lb. gain per day, the Stimplant group 2.91 lb. per day and the Synovex group 3.07 lb. per day.

"Although the gains made by the implanted animals averaged 14 per cent higher than those of the control group, there was no great difference in gain between the two treated groups," Herring stated. "Our test shows some advantage in the use of implants, but this is only one test, and we have no carcass grades to compare with those of non-implanted animals. Until more information is available it's pretty much up to the individual whether he uses implants or not."

"You will notice that no shrink was taken on these cattle when they left the feedlot. We allowed for shrink by weighing the animals right after they'd been fed, and again on an overnight shrink before they'd received their morning feed."

(Please turn to page 63)



I Guide photos
This rock and earth dam placed across the Wascana Creek by a farmer builds up the depth of water to be pumped to a sprinkler system in the Qu'Appelle Valley.



Tractor power pumps water from Wascana Creek to irrigate 300 acres of peas and seed potatoes, located close to big Regina market.

Who Wants Water?

by RICHARD COBB

**Water control is affecting more and more Prairie farms.
Here's what some farmers are doing with it**

IS irrigation just a costly gimmick that can land farmers in a heap of trouble? Is it only for specialized crops on quite limited acreages? What's wrong with dryland farming if already it can produce more than enough for our needs? Questions such as these will confront an increasing number of Western farmers as opportunities to irrigate come along.

One way to look at irrigation is as part of the science of water control. As everyone knows, there can be too much moisture at certain times and too little at others. Water control means preventing floods and erosion, conserving water in storage systems, and using it for people, livestock and crops as the need arises. But it poses several questions. How much water control can be afforded? How should it be done? Can the water be put to good use?

The farmer has a choice. Taking Saskatchewan as an example, he and his neighbors can apply to the provincial government or the Prairie Farm Rehabilitation Administration for advice and assistance in developing a water control project. He can use facilities that are provided already in his district. He can go ahead and devise his own scheme, if it does not interfere with other people's water rights. Or he can continue on his present course.

There are more than 60,000 water control projects on the Prairies. Assuming that a farmer decides to become involved, what's he going to do? Grow watermelons? PFRA has a clear-cut answer. Their experience in the past few years is that farmers who have one project are requesting another. This indicates that their efforts to modernize their farms depend on more plentiful and assured water supplies.

It is estimated that 130,000 acres are being irrigated in Saskatchewan. Around 50,000 acres of this total are dependent on the larger schemes. The remainder represents plots of 1 to 20 acres fed by do-it-yourself projects ranging from dugouts to small dams. These are mainly for gardens, shelterbelts, limited acreages of certified seed, and the like. In general, the larger projects collect water in well-defined watersheds, while smaller projects serve farms in outlying areas.

Of course, not every area needs flood control or irrigation. The question that needs to be answered is whether these fit into a particular farm pattern, and if so how.

Last June, in Saskatchewan, large areas of pasture and hayland were dried up. Precious hay reserves were being used. But here and there were oases of green, where irrigation ditches or sprinkler systems had done their work. To illustrate the extent of the water shortage, some storage structures completed in the previous year had not a drop of water in them.

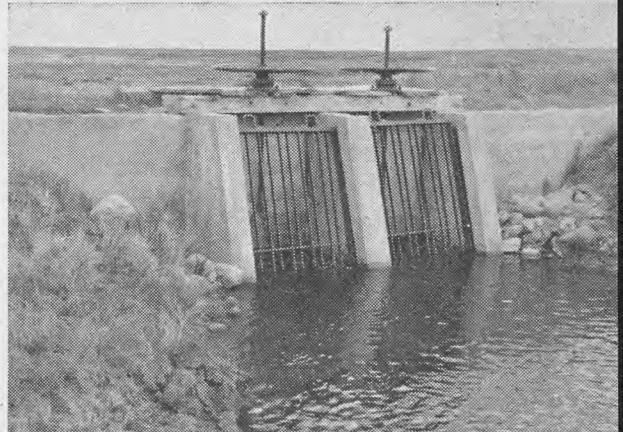
AT Pambrun, in the same dry period, the Williamson brothers were not missing a trick. John, George and Bob were able to use a PFRA water control project on Russell Creek. They had a series of irrigation ditches running from the main canal, and were building up the level with wooden locks and canvas dams, so the water would flow onto their land down diked strips or through furrows. They had also used the spring runoff by leveling a field and cutting off the natural flow with a dike. By these methods they were able to produce hay and grazing for cattle and sheep, and were growing Russian wild rye-grass for seed.

PFRA had dammed Russell Creek, forming a reservoir to send water as it was needed down to a control structure near the Williamson farm. There the water built up in a secondary reservoir to maintain an adequate flow to eight neighboring farms. Any surplus was turned back into the creek.

A FEW miles to the east, at Vanguard, the Wood River development was providing irrigation water for about 5,000 acres with a system of three dams. There the principle was different. It was designed to maintain the level of Nokuteu Creek, from which farmers could draw water directly. One of them was using an old tractor to pump water from the creek, without needing to build a dam or rob his neighbors of their water rights. He was irrigating about 40 acres of brome and alfalfa with sprinklers. Aluminum pipes and sprinkler heads are not cheap, but the cost could be (Please turn to page 66)



Lock is raised to run water into a ditch on the Williamson farm to irrigate 80 acres of forage.



Control structure stores water to feed the irrigation canals from Russell Creek near Pambrun.



Peter Sather using flood irrigation for land he leases at Rush Lake project for hay production.



• C. McKay, on the tractor, and E. Melville distribute feed to turkeys from a 90-bushel portable mixer. They are 2 of 5 employees at the Kowal farm.



• Frank Kowal inspects a topmost mushroom flat in the turkey brooder house a few days after the first "buttons" appear. Average yield is 2 lb. a sq. ft.

Turkeys and Mushrooms

Starting from scratch in 1953, the Kowals have built this unusual farm enterprise into a paying proposition in spite of serious setbacks

TURKEY and mushrooms sounds like the top offering on a dinner menu. But to Frank Kowal, of Killarney, Man., the two put together sounded like an efficient combination when he started farming 7 years ago.

The initial investment—a half-section of land, the equipment to farm it, and some livestock—came from savings from army pay and postwar construction jobs in Churchill. From the start, the Kowals have worked to get away from a strictly grain-livestock program. The first step in this direction was a modest one indeed, when compared to the 22,000 turkeys, and 8,000 square feet of mushroom space Frank had by 1959. He began by brooding 200 poult in an unused upstairs room in the house. They were transferred



• This equipment is used to turn the horse manure before it is placed in the mushroom growing flats.

by R. N. WALDON

out of the "brooder" to shelters with slatted floors and brought to market weight in semi-confinement.

The following year, when it seemed as if turkey-raising might pay off, Frank fixed up the loft in the barn and brooded 1,000 under infra-red lamps. He used the barn for 2 years before making the first major investment in equipment intended specifically for turkeys. This was a 32' x 110' brooder house which Frank built himself with the help of one hired man. It cost \$6,000, and the equipment cost an additional \$4,000.

By this time, with 3 years' experience behind him, he had dealt with most of the troubles that plague turkey growers. Those, such as cannibalism and crowding, had been successfully overcome with the help of Dr. Ken Warren, local veterinarian, and by applying constant vigilance and common sense. The vigilance has paid off in full, for up to now, the Kowals have suffered no appreciable losses from disease.

However, as Frank had no previous experience with raising poultry on a large scale, there were setbacks which were due to inexperience and had to be written off as costly practical lessons. For example, in the second year, he decided to use his own feeding system instead of sticking strictly "to the book" as he'd done in the first year. The result was too much growth and too little fat on his birds.



• The Kowals ready to leave for a Sunday drive. The building behind is one of the two 32' x 110' brooder houses.

"All bones and feathers!" laughs Frank. "Now I stick to the text!"

There were setbacks which cannot be classed either as errors in management or as routine troubles. In November 1958, an early storm buried the shelters under mountains of snow. Before the birds could be dug out, 1,400 had smothered. This loss was largely covered by insurance, but even so, 14½ tons of dead turkeys in a pile, and 1,600 survivors in dubious condition can be a discouraging sight.

Then, like lightning striking twice in the same place, another snow storm in October 1959, resulted in Frank Kowal losing 9,500 of his birds. After this happened he felt he'd never raise another turkey. But once established in the business, it's difficult to drop it even after two of the most discouraging experiences anyone could encounter. Frank has rallied and is planning to raise more birds than ever in 1960.

THE turkey grower's year begins in real earnest with preparations for receiving the day-old poult. They arrive in March to begin an eating marathon that will see the toms at 28-lb. market weight in 26 weeks, and the hens at 16 lb. in 24 weeks. By that time they will have consumed 8 pounds of starter each, 20 pounds of concentrate, and about 47 pounds of coarse grain. In 1959 the turkeys consumed 935 tons of feed, or about 270 bushels a day at maximum intake. And the gravel they required would have covered a path 3 feet wide and 240 yards long to a depth of 3 inches.

Usually, the first carload of hens is out by the first week in September, and the very last of the toms leaves by the 10th of November. The birds are sent for custom eviscerating and are held in cold storage until the time of sale. Frank sells the birds himself.

SO much for the turkeys. What about the mushrooms? Frank says the idea of growing mushrooms has been with him a long time. His first interest came about as a result of reading about the handsome profits to be had from mushrooms. But the idea remained a pipe dream until the plans for the first brooder house were being made. It occurred to him then that the obvious way to use the space which would otherwise be vacant for 10 months of the year would be to culture mushrooms.

The approach which started him in turkeys served him well with the new project. He knew absolutely nothing (Please turn to page 67)

High Summer

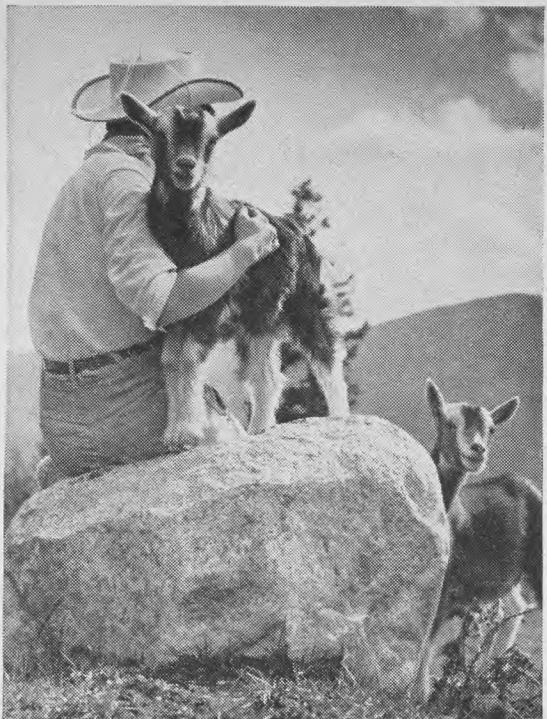
Story and Pictures

by DONOVAN CLEMSON

"**P**A'S up there," said Trudy, pointing to the mountain top. "You can see his light at night." Trudy was in the pasture of the Hambrook farm, looking across a wide valley to Tuktakamin Mountain (5,811 ft.), where the British Columbia Forest Service has a fire lookout tower manned by Joe Hambrook.

Trudy and her mother tend the farm while Joe is on the mountain. If the weather's dry, they may be separated for weeks. Joe can look down on the little green square of his farm, so near and yet so far, only 20 miles away along a winding mountain track. He can't talk to his family, but is in touch by radio with other lookouts and by telephone with the Forest Service at Vernon.

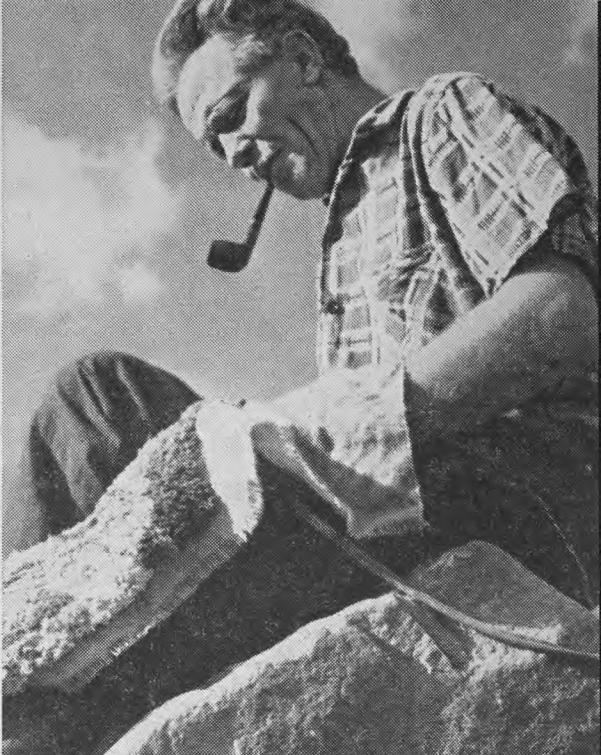
After Joe has done his chores — cooking and washing, or fetching water from a spring — he still has time on his hands. So he turns to whittling



Trudy, accompanied by her goats, looks toward the mountain where her dad keeps a lonely watch.

animals from wood, hooking rugs, or even dashing off a few verses. He's loneliest during a storm, when he has to disconnect his radio and telephone and stay in the tower.

When the fire season is over, Joe comes home loaded with handicrafts, maybe a bobcat skin, rock specimens and a sheaf of poems. There's a joyous reunion at the Hambrook log cabin, sheltered from the winds, where a lookout man can spend a snug winter. \checkmark



Atop Tuktakamin Mountain, at a forestry lookout station, Joe Hambrook hooks a rug for a pasture.



Joe can always count on a breeze to dry washing up near the B.C. Forest Service's lookout tower.



The hardest chore in the routine is packing water from a spring a quarter-mile below the summit. Joe with a water bag holding four gallons, takes a rest on this rock ledge not too far from the top.



Joe Hambrook is using the fire-finder. He considers this to be about the oldest model used in the forestry service, but he can still line up a fire pretty accurately by taking a sight through the instrument.



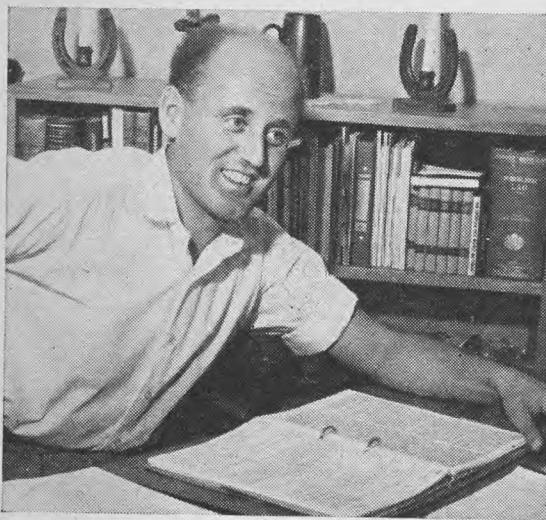
Mrs. Hambrook and Trudy look up anxiously at the mountain when lightning strikes around peak.

How They Study at Alnarp

by LYN HARRINGTON

Photographs by RICHARD HARRINGTON

A glimpse at agricultural education in Sweden, where farm workers have an 8-hour day and vacations with pay



Bror Linden in his small study-bedroom at Alnarp. Note the thick volume titled "Lag" at right, which contains Swedish code of laws and is to be found on many a farmer's bookshelf. Bror knows Canada, having worked as a hired hand on farms here.



The attractive agricultural school at Alnarp, Sweden, contains classrooms and dormitories for students, who also work on the estate for experience.

I SPENT a year and a half, working on farms in Canada," Bror Linden's very blue eyes twinkled, and his fine teeth showed in a wide smile. "I liked Canada." We glowed. "But I don't think your farmers have it so good as here in Sweden."

Startled, we pressed for an explanation.

"Well, I worked at several jobs in different parts of Canada," Bror told us, "to get experience and to learn about farming in a new country. It was mostly in British Columbia, though I picked up odd jobs in Eastern Canada too. In Ladner, I worked on a dairy farm, in Princeton on a turkey ranch, and then in a dairy in Vancouver."

He was certainly getting experience which is what Swedish agriculturists urge upon students. One learns various ways to approach a problem, they point out, even if most of the techniques used in Canada and the United States are not applicable in Sweden.

"Canadian farmers work their farm help far too hard," in Bror's opinion. "Hired help is expected to work too long and for too little return in your country. In Princeton, I got \$140 a month, with only shelter provided. I had to buy and cook my own food. Just the same," the smile flashed back, "I'd have stayed in Canada, except for family reasons."

BROR LINDEN is a senior student at Alnarp Agricultural Institute, one of the oldest of Sweden's many agricultural schools. Alnarp's 600 acres were an estate of the Governor of Skane Province, southwest Sweden, until taken over as a farm school a century ago. In fact, Alnarp is a 5-pronged thrust into agricultural learning. It is comprised of two state research stations—Horticulture and Dairy—and three departments—Horticulture, Dairy and Agriculture.

In turn, the Agriculture Department has three sections: Alnarp Estate, which provides goods for sale, and management lessons for the students; the Farm Management Course, in which Bror Linden is a student; and the Agricultural School, where he was one of 30 students 10 years ago.

"Students in the Agricultural School must be over 18 years old—I was 23," he told us. "They must have high school education, and at least a year's experience on a farm. Oh yes, they have to be strong enough for farm work, too!"

Students in Swedish educational institutions do not pay tuition fees, and only nominal board. During the year at Alnarp, or any agricultural school, the students have classroom lectures as well as demonstrations and actual farm work. Each student puts in so many hours work in return for his board, and is paid cash for overtime. We saw them gather in the harvest, feed the pigs, fuel farm machinery.

"The course is a year, and at least half the class went back to work on family farms. Nearly every farmer in Sweden has taken some farm schooling, even if only the 6-month course in winter. The rest of us had to hunt jobs. We had the title 'Land Master,' and could go on farms as bailiffs, assistant managers, cowmen or bookkeepers. I like figures, and got a job as accountant on an estate."

He toyed with the idea of returning to Alnarp later on, after the required 3 years of practical work. But he stayed on with the book-keeping job until he got restless and set off on his trans-Canada exploration. Then he applied for the Farm Management Course.

Out of 131 applications, 54 students were accepted for this year. They were selected by a point system—credits for previous study, physical condition, experience at home and abroad. About one-third each year have worked in North America.

"Failure has been known among our students, yes," said President Nielson when I spoke to him later. "But it is very rare. After all the students are hand-picked for brains and health. We do occasionally have a girl student, but it's hard for them to get farm management jobs. Usually it's a girl who will inherit a lot of property, and even to qualify for the course, she must have a degree from the Royal Agricultural College."

(Please turn to page 68)

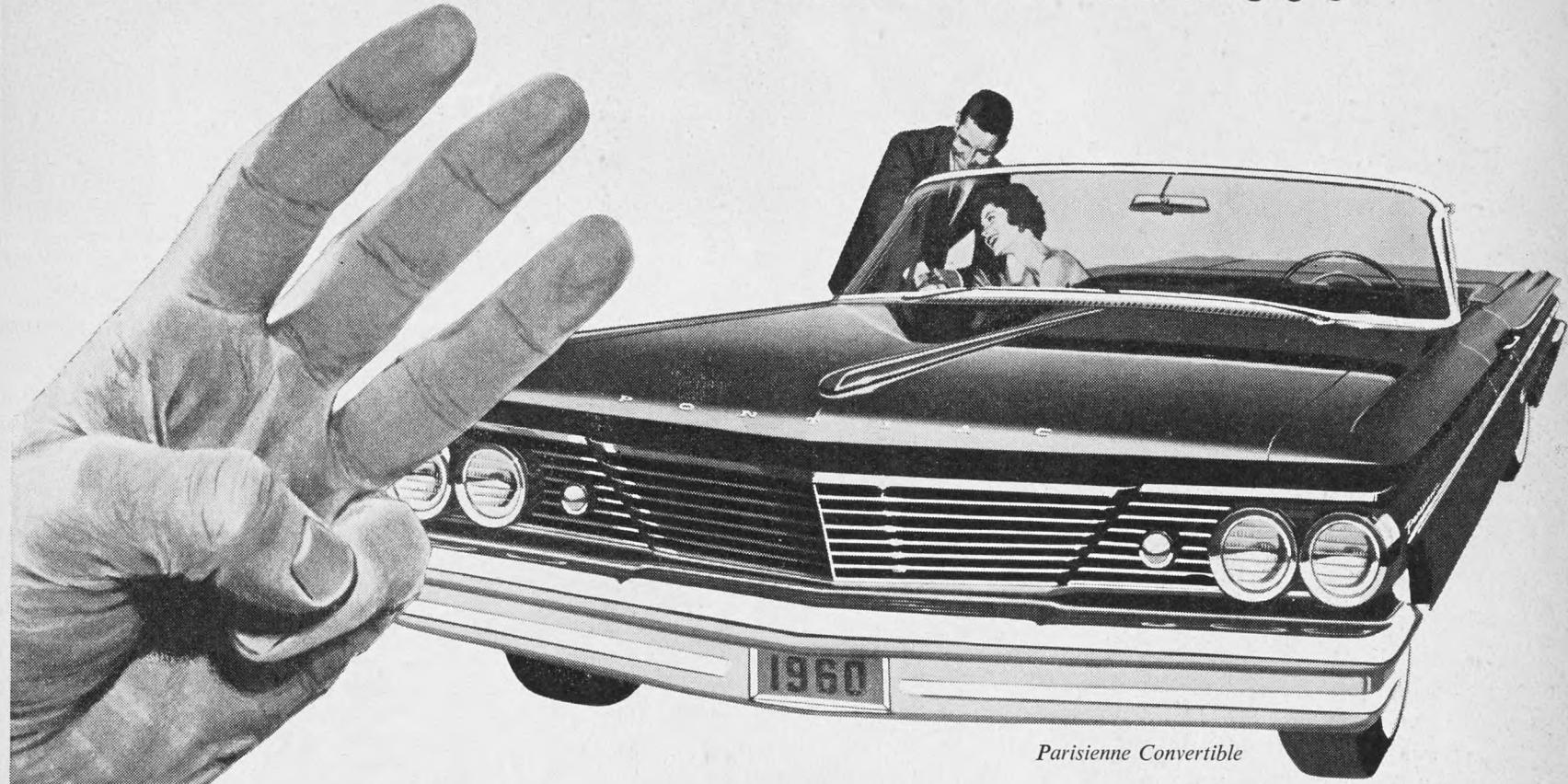


The high school girl (left) is one of the local young people hired to help when the boys are busy studying for exams. The girl on the right works in the greenhouse.

Bernt Joelsson, like Bror, is a senior taking farm management at Alnarp. Here he holds some pea-vine silage, which he reckons is the best nourishment to feed their cattle. It is also cheap, coming as a by-product from peas they grow for factory processing.



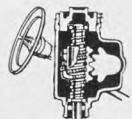
PONTIAC'S GOT IT...



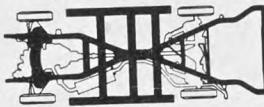
Parisienne Convertible

ON THREE BIG COUNTS

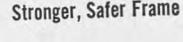
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Effortless Ball-Race Steering



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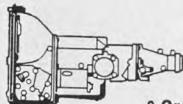


Angle-set
Shock Absorbers



Safer, Smoother Brakes

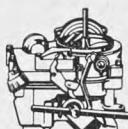
MORE PERFORMANCE—BETTER "GO"



3 Great Transmissions



Vigorous, economical V8 Power



Economy Carburetor



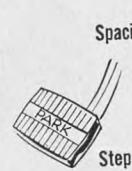
New, improved Strato-Six



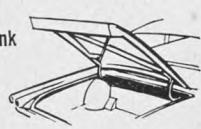
Safe-T-Track
Differential*

*Optional at slight extra cost.

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Cigarette Lighter

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• These are some of the big reasons why you'll enjoy driving Pontiac in 1960. A car to give you lasting pleasure—endless satisfaction. Count up *all* Pontiac's big advantages at your Pontiac dealers—today.

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Look, compare...you'll be a Massey-Ferguson man!

NEW WINDROW-GULPING "RAIN BEATER"

The new Massey-Ferguson 10 Baler gives you even more capacity, with no time-wasting daily greasing!

When the wind comes up and the first drops fall, what a relief it is to know the hay's in ahead of the rain!

More than any other baler, the new Massey-Ferguson 10 helps make you master of the weather...not just by chance, but by design. And it delivers uniform, perfectly tied bales, bale after bale...each one just the weight you prefer, and just the size.

It gets you into the field faster, when the hay is right and you are ready, with no time-wasting delay for daily greasing. And you stay on the go till the hay's all baled. The MF 10 Baler is self-lubricated, with factory-sealed bearings.

Out in the fields, you have stepped-up baling capacity to get the job finished while the weather stays fair. The oversized 56-inch-wide pick-

up and extra packer forks handle big, heavy windrows with ease. Every bale is tied to stay tied by the dependable automatic twine knotter.

And the bales turned out by the MF 10 are sized and packed exactly to your preference. A quick, easy adjustment sets the bale size at any length, from 12 to 50 inches. Another simple adjustment gives you bales of any "heft" you want...from 40 to 65 pounds or any weight in between. And the bales of the MF 10 are profit-making bales. Its exclusive Leaf-Guard Design handles the hay gently to save more of the protein-packed leaves that pack pounds on livestock. Isn't this the baler you've been looking for? Better see the MF 10 Baler before haying time comes around again.



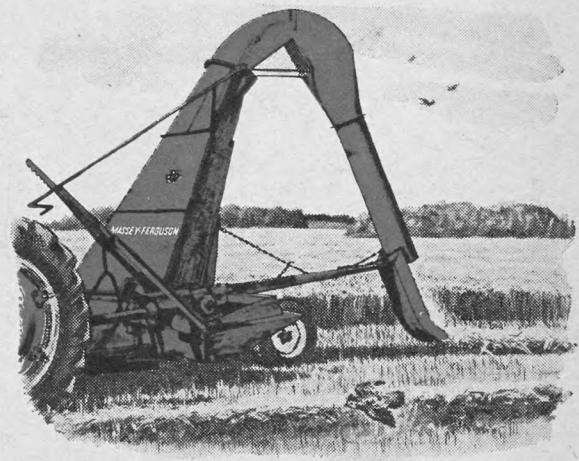
First pull-type Dyna-Balance Mower!
Hitches up fast to any tractor with standard drawbar. This MF 51 Mower gives you all the advantages in the field of the famous Massey-Ferguson no-pitman Dyna-Balance Drive: more efficiency, with less noise, vibration and wear. Variable Speed Belt Pulley permits setting cutter bar speed to crop conditions to provide maximum speed of travel. 6 or 7 ft. cut.

Rakes more gently to save more leaves because the offset reel design MF 25 Rake moves the hay only half the distance from swath to windrow. Fully mounted and hydraulically controlled for easy handling. Now available with lower priced 4 and 5 bar reels as well as with exclusive 6 bar reel.



Fully mounted in just one minute...and one man can do it with the MF 31 Mower! From then on the going's easy, in light or heavy stands. Dyna-Balance Drive eliminates noisy, wear-causing vibration. And its exclusive Variable Speed Belt Pulley regulates knife speed without extra pulleys or belts!

Mow, crush, windrow—all at once! The MF 60 flail-type Forage Harvester does dozens of jobs around the farm. With hay conditioner, it processes hay for a more uniform quality-cure with more food value...and speeds baling because up to three rounds can be deposited in the same windrow.



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WILD OAT KILLER RETURNS \$5 FOR \$1 INVESTED

Crops Grown Free
of Wild Oat Competition
Yield More, Pay More

Monsanto Avadex*, the new pre-planting herbicide, knocks out wild oats as they germinate and stays on the job throughout the early season period when wild oats are most actively germinating. Because Avadex is effective over a period of time, there is no problem with critical timing to spray wild oats at a certain stage of growth in order to get good control.

The opportunities for profits in control of wild oats with Avadex were demonstrated time after time in the field testing program.

On one farm at Lilyfield, Manitoba, for example, flax yields ran 6.4 bushels to the acre in untreated fields; and 15.4 bushels in plots treated with Avadex. At a conservative price of \$3.00 per bushel for flax, this is a \$5 to \$6 return for every dollar invested in wild oat control.

Tested in the Prairie Provinces

Such results were typical in more than 190 acres of demonstration plots on farms in Alberta, Saskatchewan and Manitoba, and in experimental plots at ten Canadian universities and experimental farms. Crop yields in treated fields consistently ran 5 to 15 bushels ahead of untreated plots.

On ten acres of summerfallow planted to Norland flax on the farm of Forrest Hetland, Naicam, Saskatchewan, Avadex applied at rates of 1½ to 3 pounds per acre gave 95% to 98% control of wild oats. Said Mr. Hetland, "at the 1½ pound rate and above, it was remarkable the control we got. The untreated check strips won't yield five bushels to the acre. The strips that we did spray with Avadex could go to 12 or 15 bushels per acre."

On a farm near Spalding, Saskatchewan, barley yields on land heavily infested with wild oats ran over 30 bushels to the acre on a ten-acre plot treated with Avadex. According to the farm operator, untreated check plots right alongside "would not have been worth harvesting."

90%—95% Control

Wild oat control ran as high as 99% in some test plots and at least 90% to 95% control was recorded in all test areas when Avadex was applied according to directions.

Effective control like this helps the grower improve his yields in two ways: First, the crop develops better without competition from wild oats for sunlight, moisture, and soil nutrients; Second, the grower can go to early plantings of late-maturing, high-yielding crop varieties.

Avadex is applied as a spray before seeding and is incorporated into the top three inches of soil by disking the same day as spraying. Wild oat seedlings die as they sprout, while the cash crop emerges unharmed.

Available Now

Avadex is the result of 10 years of research by Monsanto in the development and improvement of chemicals for effective wild oat control. It is registered in Canada for wild oat control in flax and for commercial trial use in barley, rapeseed, sugar beets and sunflower and will be commercially available for the first time during the 1960 growing season.

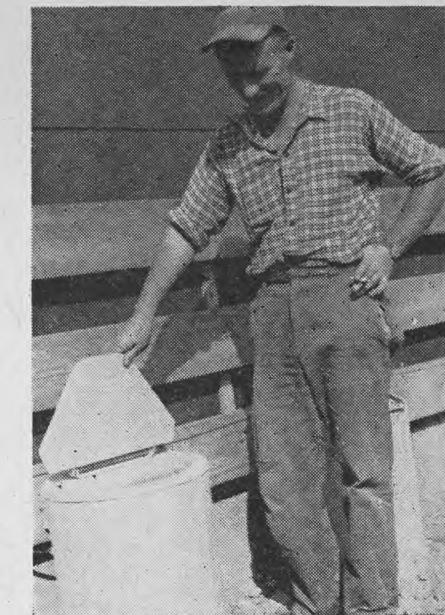
Avadex is a product of Monsanto and will be distributed by two of Canada's leading farm organizations: Green Cross Products and The National Grain Company, Limited.

*Trademark of Monsanto Chemical Company

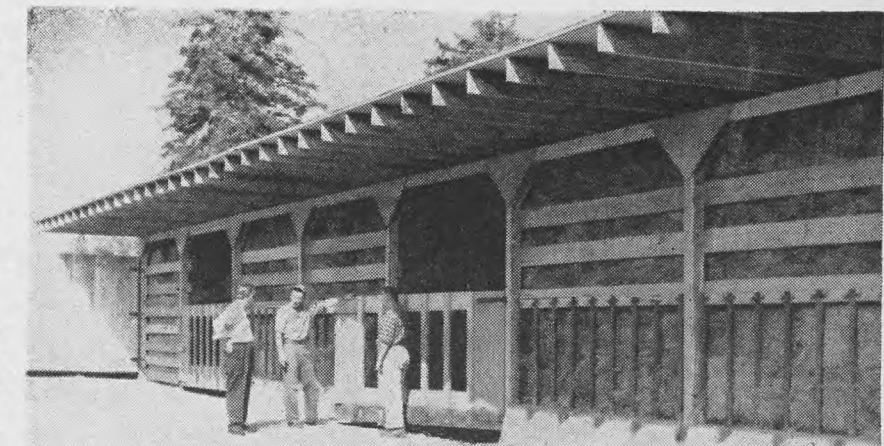
New Buildings, More Beef Cattle For N. B.

LIKE plenty of areas in Canada, and especially in the Atlantic Provinces, Albert and Westmoreland Counties look like country that could produce a lot of beef.

by DON BARON



Guide photos
Ken McCormack, the farm manager, inspects an electric heated water bowl.



Winter yard built for 60 cows has self-feeding hay sheds along each side. Note overhanging roofs to give shelter to the cattle as they are feeding.

which has a 12 ft. slope to one end, has a 7 ft. overhang to shelter the cattle as they feed. The building is built in 10 ft. bents and 3 of them form individual drive-through areas, which can be filled with hay as well.

These building will be a demonstration to many farmers in the district on modern ways to house cattle. The combination hay storage and self-feeder he has erected measures 90 ft. long and 23 ft. wide. The flat roof,

A similar hay storage building, set parallel to it, 60 ft. away, forms the other wall of a 60 ft. by 90 ft. yard, which accommodates 60 cows. At one end, an 80 ft. by 35 ft. rigid frame building opens into the yard, and provides shelter.

LOCKHART can add new hay sheds, side by side, and rigid frame buildings as his herd is expanded. He is also equipping his yard with a weigh scale and loading chutes, so cattle can be easily handled, weighed and shipped at any time.

The Lockhart development is one of many.

Agricultural representative Saunders reports that people are calling him every week, asking what farm loans are available to help them buy more land and expand their herds. He says there are herds of 20 or 30, or even up to 60 beef cows, on the marsh. The community pasture in the county, consisting of land that lay idle for years, grazed 265 head of cattle last summer.

"There are hundreds of cattle here now that weren't here 5 years ago," he reports. "It's not a fast or furious growth. It's just a steady growth of the beef business. Before many years, we are going to have a big beef industry in this area." V



Government engineers adapted tile ditcher to help reclaim dikeland that had not been ditched during 70 years.



Rigid frame barn is at one end of the yard. Scale house and loading chute are also included in Leonard Lockhart's new set of beef cattle buildings.

Dairymen Try a Bonspiel

... for a good old-fashioned social get-together



(l. to r.) S. Johnson, Brittain; (waitress); C. Gibson, Alma; K. Hammond, Moorefield; H. Nickel, Gowanston.



A. Carter, R. Fralick and J. Beckett (l. to r.), Port Perry, Ont., chat with L. Blakely, Greenbank, between the games.

THE normal pressures of farming make it difficult enough to keep harmony and good will in the ranks of any farm organization today. For members of the huge and sprawling 2,800-member Toronto Milk Producers Association, the coming months threaten to be even more difficult than ever. Big changes appear imminent in milk marketing, with a possibility of some form of milk pooling being introduced. There is plenty of disagreement about price differential for butterfat. And other controversial issues are lined up which could easily pit farmer against farmer, if members got carried away with real or imagined grievances.

"Best way to maintain harmony in our group, is to get the members together socially," reasoned President Frank Todd, and Secretary-Treasurer Jack Pawley. Their problem—what is the best way to do it?

At the annual meeting, there isn't time. In the summer, members are too busy at home. This winter, Todd and Pawley decided to try a bonspiel.

They lined it up for March, and rented a rink for a day at Bolton, north of Toronto. They asked the director from each of the 16 districts of the Association to organize a rink from among their members. And, on the morning of the bonspiel, 16 rinks were on hand.

Men came from 100 miles and more away, both east and west of Toronto. Long-time curling enthusiasts came, but one rink had three members who never curled before.

There were gimmicks to spark the good humor. A wooden pig,

set beside the rink, was there to receive a 25-cent fine from anyone failing to get his rock across the hog line. Fines were threatened on anyone talking shop — although there were still whisperings of the dairy business as the members loafed in the lounge, had coffee in the snack bar, or ate the banquet that night. But it was good-natured discussion, the kind that leads to the settlement of differences. In effect, dairymen got to know shippers from other areas better. They found that even if they didn't agree with a fellow in detail, they could still find common ground when they knew him personally.

There was good-natured rivalry between districts before the bonspiel was over. The dairy farmers ban-

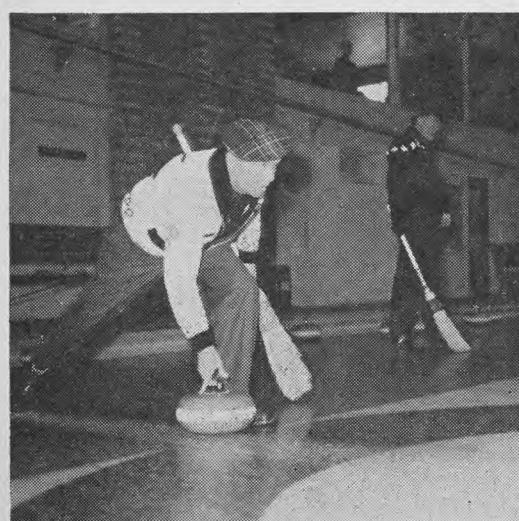
queted together. The winners accepted the trophy and other prizes.

And the bonspiel didn't cost the Milk Producers Association a cent. The \$3 paid by each member who came out covered the \$100 rink rental and the purchase of some of the prizes as well. The trophy, and a few other prizes were contributed by commercial firms.

"Looks like we should make it an annual affair," said Jack Pawley later. "Next year, we'll organize it earlier, so there will be time for playoffs in each district, for the honor to come out to the final, here. Maybe we will invite rinks from the dairies and other groups we do business with as well. It will be good for all of us to be better acquainted." —D.R.B. ✓



While members of some of the 16 rinks dined and visited in the cafeteria and lounge, others were hard at the game to compete for the prizes.

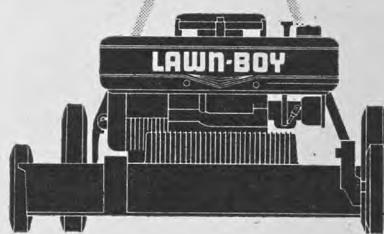


(left) Alan Carter of Port Perry in the act of delivering a rock.

(r.) The skip got this one right where he wanted it placed.



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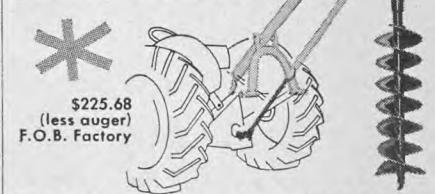
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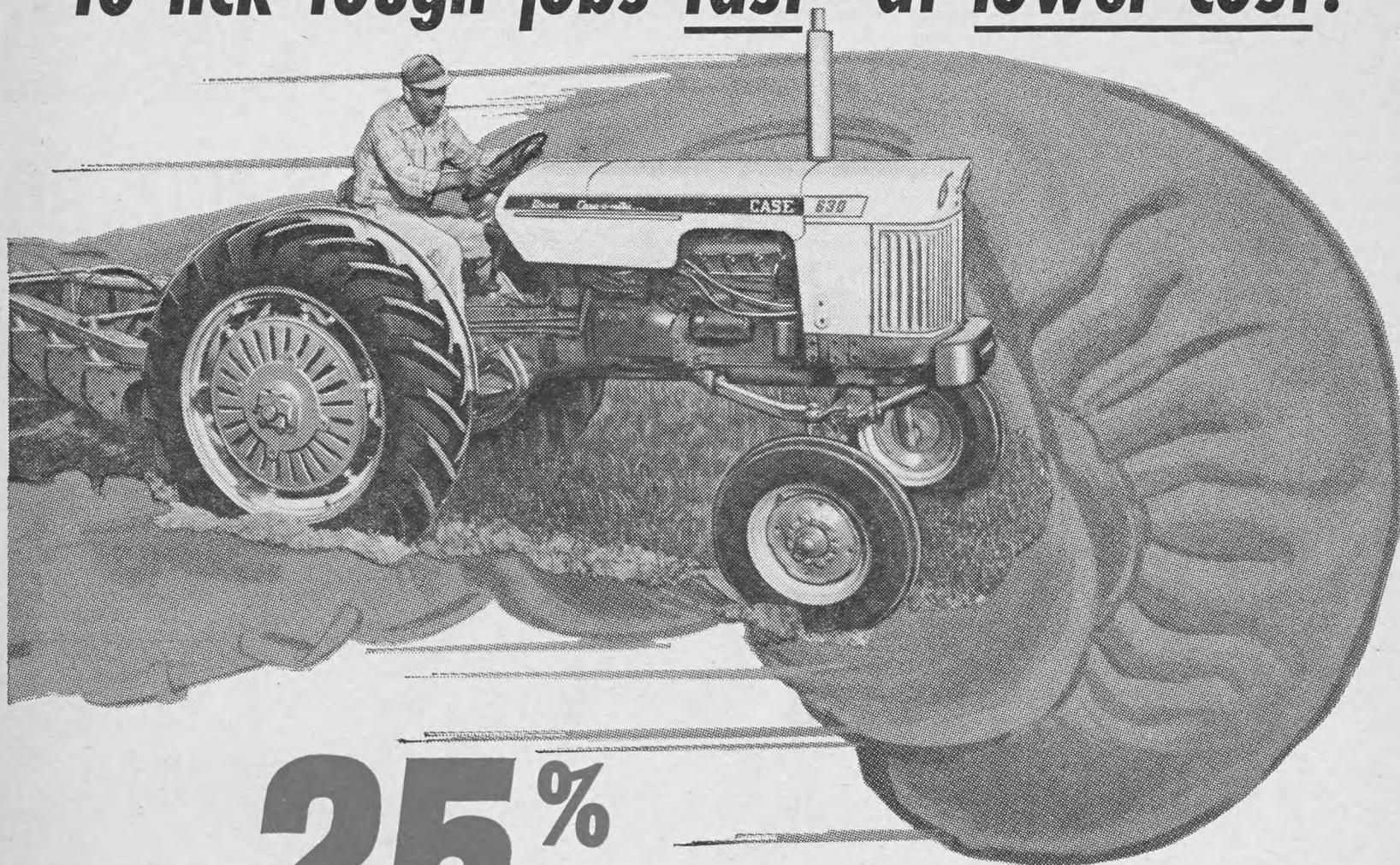
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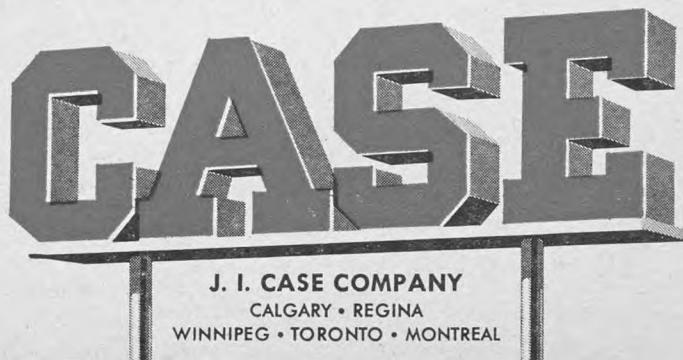
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Through Field and Wood

by CLARENCE TILLENIUS—No. 19



SPRING had come. In the lee of poplar bluffs and on northern slopes a few shrunken snow patches lingered but the big marsh lay in one wide expanse of blue water and bleached-tawny reeds. A long narrow arm of marsh ran southward, bisected by a fence put down in some drier year. A wavering line of posts and wire disappeared gradually in the water, reappearing farther on and staggering up the opposite bank.

For several days now the narrow slough had been enlivened by a pair

of newly returned mallards, who fed and preened and splashed in the sparkling water. Occasionally some real or imagined alarm would cause them to take off, quacking loudly, invariably returning later with satisfaction to what was evidently a favorite spot.

One day the boy watching from his hideout along the old fence saw the drake returning alone, pitching in over the dead reeds. The sun had traveled a considerable arc when the boy had to go, but the she-duck had not returned.

The homeward path passed some scattered poplar and willow thickets. The boy had gone a quarter of a mile when a sudden flurry in a willow clump startled him. The hen mallard flew out. He had come upon her so suddenly she had not time to cover her nest. In a hollow of dead leaves lay a ring of down and the gleam of greenish eggs.

Pleased to have found it, the boy admired the nest a few moments and was turning to go when from a distance came an ominous sound of cawing. The boy knew too well that no crow would miss the significance of the duck's hurried take-off from dry land. Turning back, he gently drew the coverlet of down and leaves over the eggs. A few dead leaves sifted over, and even the sharpest eye could not have detected that beneath that willow clump lay a treasure—the promise of other greenheads to enhance by their presence the sloughs and potholes of our land.

v

SEEDS = C



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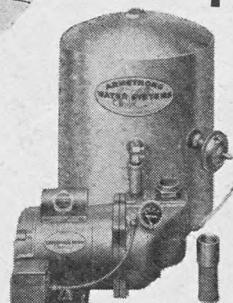
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Dynamometer test shows how borderline spark plugs waste power and gas without your knowing it!

More and more Canadian farmers are learning that

it takes a dynamometer test to spot borderline spark plugs. That's because borderline plugs cause only slight misfiring or none at all.



Recently, farmers from around Brampton, Ontario drove their tractors to the Massey-Ferguson dealership of "Woody" Sholdice for a maintenance "clinic". A power take-off dynamometer was used to measure the pulling horsepower of their tractors just as they came from the farm. Then a new set of

Champion spark plugs was installed and another dynamometer test was made. In case after case, changing plugs made a real improvement in performance—further proof that too many tractors have power-wasting borderline spark plugs and that their owners don't know it.



If your tractor has been working hard for more than 250 hours without a change of plugs, then it's more than likely that you've got a set of *borderline* plugs in your engine.

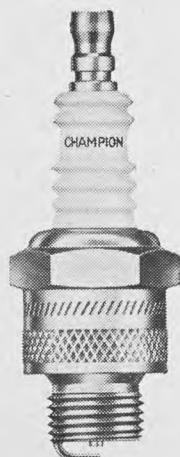
Most farmers find it's next to impossible to spot *borderline* plugs by ear or by "feel". That's because they're not bad enough to show serious misfiring. But dynamometer tests show that they are bad enough to waste many valuable horsepower and a lot of gas.

There's one sure way to prevent this waste and keep your engines at full power and economy. Install new Champion spark plugs regularly—every 250 hours.



DEPENDABLE

CHAMPION
SPARK PLUGS



Douglas Cunningham of Inglewood, Ontario, was surprised by the result of the dynamometer test on his tractor. "She seemed to be working good except that every once in a while she'd cut out under load. The dynamometer test showed that a new set of plugs gave me six more horsepower. That'll mean a big saving in gas, too. If you'd asked me before the test, I'd never have said that changing plugs could do so much to improve performance."



Gordon Proctor, Ross Proctor and Bill Sweezie of Newmarket, Ontario, discuss the results of the dynamometer test on their tractors. Says Ross Proctor (centre) "My tractor was missing on the pull, but otherwise going well and I thought the miss was due to poor points. With new plugs in, the miss was gone and the dynamometer registered a 6.3% increase in horsepower. I change plugs every season, but maybe that's not enough when a tractor is worked to its limit." Bill Sweezie (right) adds, "The dynamometer showed a 2-hp increase after changing plugs in my tractor. I was surprised that new plugs could make that much difference because the tractor seemed to be working so well on the old ones."



Laszlo Toth (right) tells Bill Ness (left) and Arne Fredericksen (centre) of Aurora, Ontario, what a change of plugs did for his tractor. "This tractor is pretty old and was running very rough and I knew it needed a complete overhaul. After new plugs were installed the engine smoothed out and pulled four more horsepower. Of course the engine still needs work, but I couldn't believe just changing the plugs could make so much difference."

SELECTIVE

sprays that **KILL WEEDS**
and still **KEEP CROPS**



HERE'S PROOF

"I was going to plow under 40 acres of established Birdsfoot Trefoil because of a very heavy infestation of Canada Thistle," says Lawrence Kerr, R.R. 6, Chatham, Ont., "but I decided to give 'Embutox' E a try, first. The control from one spraying was excellent. I expect to get another two or three years grazing, thanks to 'Embutox' E."

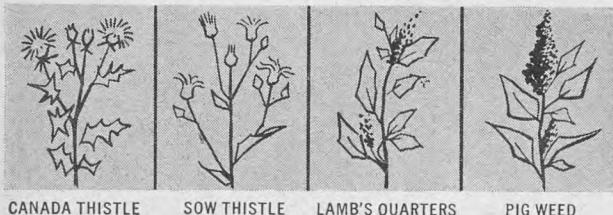
HERE'S PROFIT

Crop yield and grades spell profit. You can increase your profit as did Lawrence Kerr with M & B selective weed killers—"Embutox" E and "Tropotox". Both have a *selective* weed-killing action that destroys problem weeds and gives your crops room for profitable growth. Application costs are small compared to your increased yields. "Embutox" E and "Tropotox" are easy to apply, harmless to handle, and so effective. Made exclusively by M & B, a world famous name in the field of Agricultural Chemicals.

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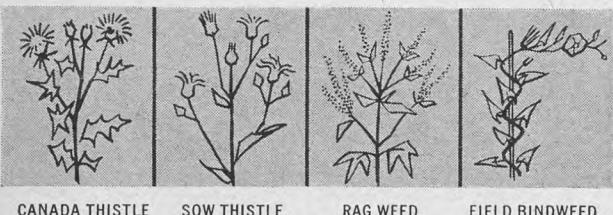
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LIVESTOCK

Take free advice, says
Nova Scotia sheepman

He Plans 200 Ewes For 50 Pasture Acres



Guide photo

Some of the Cheviot ewes on the Ken Atkinson farm at Diligent River, N.S.

FIIFTY acres of Nova Scotia's rain-drenched grassland will graze 200 ewes, predicts newly converted sheepman Ken Atkinson. If each ewe grosses an income of \$21, that totals over \$4,000 per year.

How can it be done? "Just take free advice," he says. "It's available to every farmer." After watching his flock of 50 ewes and their lambs, and 12 yearlings as well, fail to keep 5 separate fields (16 acres) pastured off last summer, he is certain he can reach his high-sounding goal.

For Atkinson, planning his sheep program meant calling at the Truro Agricultural School, and discussing it with sheep enthusiast Peter Hamilton, and other government officials. "I followed their advice to the letter," he says. He planned a grassland program for the 50 acres he was clearing near the little hamlet of Diligent River. He laid out a crossbreeding program, using a Hampshire ram on Cheviot ewes. And he figured to creep feed winter-born lambs before they go to grass, sell them off pasture about August weighing 80 to 90 lb.

He sent soil samples to Truro, and as directed, applied 3 tons of lime, 1 ton of 6-12-12 to his pastures, and seeded them down.

And last fall, only a year and a half after he started out, he was putting up a new 40' by 100' sheep barn to make room for the ewes he was buying to expand his flock.

Atkinson is a retired businessman from the United States, who hunted through the area each fall for years, and couldn't resist the lure of that picturesque part of the province when he quit his business.

He buys the hay his flock requires, and has a young neighboring farmer, Arlie Canning, do most of the work and share the profits from the enterprise.—D.R.B.

Gains Upped By Creep Feeding

TESTING creep feeding for beef calves, the Brandon Experimental Farm, Man., provided a creep ration of rolled oats, rolled barley and wheat bran in a ration of 2:1:1 for 22 calves. A control group of 18 calves was given no supplementary feed during the nursing period. The test began on May 15 when calves were about 6 weeks of age and continued until weaning at 6 months.

There was no advantage in the first 3 months for calves on creep feed, but they did exceptionally well in the final 6 weeks by gaining 125 lb. per calf compared with an average of 95 lb. in the control group. The average for the whole test period was a gain of 286 lb. and weaning weight of 416 lb. for the creep-fed calves, and an average of 266 lb. gain and 405 lb. at weaning without creep feed. V

Choosing a Herd Sire

GIVE some thought before you set out to buy a herd sire, suggests Joe Kallal, livestock fieldman, Alberta Department of Agriculture.

A good bull, viewed from the rear, should have a thick, meaty appearance; width on top, plus a moderate spring of rib, with top width continuing back and down through the hind-quarters. Shoulders should be smooth and not prominent.

From the side, the bull should have a short neck, clean throat, good depth of body and a rear quarter that approaches the front quarter in weight.

A bull should have good weight for his age, enough clean flat bone to carry the weight, and well placed legs with good feet. Hind legs should be reasonably straight and not sickled. Masculinity, quality, smoothness, docility, alertness, showiness and agility are other factors to look for. V

Ways to Avoid Bloating

THERE'S no known cure for bloat, unless you can call puncturing the rumen a cure, so the best course is to try to prevent it. Dr. C. M. Fraser of the Ontario Department of Agriculture, has listed the things that most of Ontario's dairymen are trying until something better is developed:

1. Feed grain or hay before turning stock on pasture.

2. Work cattle onto lush pasture gradually. If you strip graze, move your fence about 4:00 p.m. when the cows are less hungry.

3. Keep soil fertility high on all pastures.

4. Seed no more than 50 per cent legume in a grass-legume mixture. Some farmers find that orchard grass with legumes is less dangerous than brome with legumes after the first hay cut. Apparently, orchard grass recovers better later in the season.

5. Lespedeza and birdsfoot trefoil seldom cause bloat. Alfalfa and clovers are less dangerous when they are fairly mature—blooming or later.

6. Don't pasture legumes when the leaves are wet from dew or rain.

7. Strip graze cattle so they eat coarser material that is close to the ground.

8. Sell chronic bloaters, especially breeding stock that might pass it on to their offspring. Some researchers believe the tendency to bloat is inherited.

Lamb Weight Influences Observed

AFTER studying for 12 years the factors that influence the weight of lambs, the Manyberries Range Experimental Station, Alta., reports that these factors include twinning, age of dam and age at weaning.

Records from 1,500 Romnelet ewe lambs showed that single lambs weighed an average of 12.5 lb. more than twins raised as twins, and 2.8 lb. more than twins raised singly. These differences can increase in dry years, as singles do better relatively than twin lambs when milk and grass supplies are reduced.

Lambs from dams aged 3, 4 and 5 years old weighed 2.7 lb. more than those from 2-year-olds, and 1.7 lb. more than those from 6-year-olds and over. The highest yields of lambs come from a flock that is balanced with respect to age. Only sufficient young ewes should be added each year to replace the ewes culled for age and defects.

Age at weaning has a large influence on weight, since the average gain of lambs during the nursing period is slightly more than one-third of a pound per day.

Salt for Cows

AS cows vary in their need for salt, feed some salt free choice. Hand feeding and mixing salt in the grain rations might not supply the individual needs, says Prof. G. E. Raithby, head of the animal husbandry department at Ontario Agricultural College.

NEW

Hitch-and-Go Haymakers from **NEW IDEA**

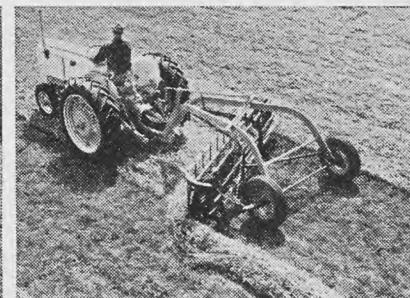


Hitch-and-Go Hay Conditioner.

Your hay's in safely one day sooner when you condition with this NEW IDEA. Big self-cleaning rubber roll and fluted steel pick-up roll provide positive feed-through with less wrapping, less plugging. Stems split. Leaves stay. Use behind tractor or in tandem with NEW IDEA semi-mounted mower as shown for one-time-over mowing and conditioning.



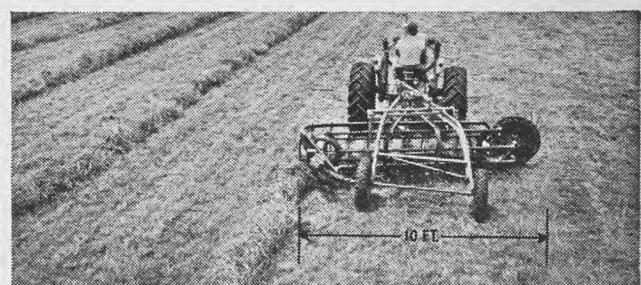
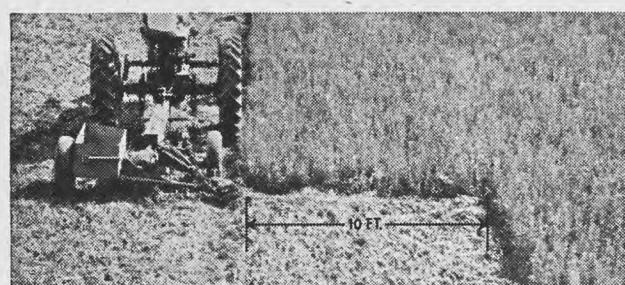
Hitch-and-Go Mower. Drop pin, snap on PTO and mow! NEW IDEA full trailing mower zips through heaviest stands . . . clips clean . . . cuts even. Simple, rugged counterbalanced pitman can't be beat for non-plug cutting and low cost upkeep.



Hitch-and-Go Rake. Parallel bars revolve like clockwork on sealed-for-life ball bearings. Gentle action rolls hay into fluffy, free-breathing windrows. Only 2 daily grease points. Also available as a quick on and off mounted rake to fit most tractors.



Hitch-and-Go Harvester-Shredder cuts, chops and loads in one time over. Shreds stalks. Clips pastures. Discharge at top or just above shredding chamber. NEW IDEA Forage Box and Bunk Feeder is the most ruggedly built box you can buy.



New Idea Giant 10-Foot Mower and 10-Foot Rake pay for themselves with savings of time and fuel!

NEW IDEA 10-foot full trailing mower does 10 hours mowing in six . . . up to 75 acres in a 10-hour day!

NEW IDEA finger wheel extends NEW IDEA pull type parallel bar rake (above) to full 10-foot raking width.

New NEW IDEA Hitch-and-Go Haymakers fit every make and model of tractor.
See your friendly, helpful NEW IDEA dealer or mail this coupon today!



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NEW IDEA Coldwater, Ohio

Please send free literature on the following haymakers.

<input type="checkbox"/> Full Trailing and Semi-Mounted Mowers	<input type="checkbox"/> Harvester-Shredder
<input type="checkbox"/> Pull Type and Mounted Parallel Bar Rakes	<input type="checkbox"/> Forage Box and Bunk Feeder
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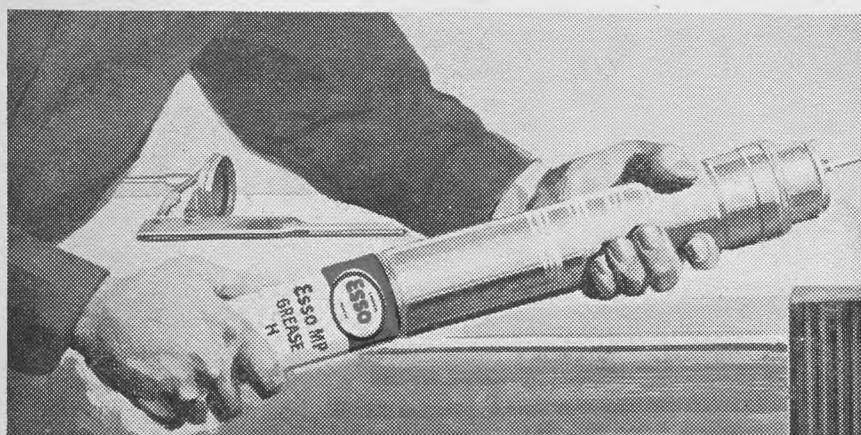
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Esso

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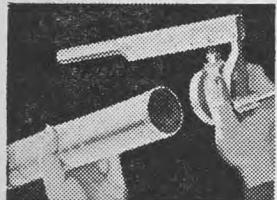
in CARTRIDGES!



The worst part of greasing? Without doubt it's the messy job of refilling the grease gun from a pail. But that's a thing of the past. You can now buy multi-purpose Esso MP Grease H in cartridges. You just insert the cartridge in your grease gun, and you're ready to grease any fitting. There's no waste, no mess... and no dirt can get in.

Esso MP Grease H in cartridges will save you time, and it will protect your valuable farm equipment. Call your Imperial Esso Agent now.

makes greasing so easy—no waste, no mess

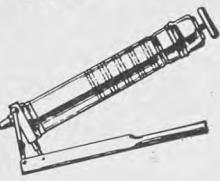


Slip off the caps, and you're ready to load. No messy pail. No waste.

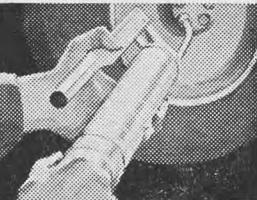


Insert cartridge in gun. It's done in a jiffy. And no dirt can get into the grease.

special introductory offer



To introduce you to this new, faster, easier method of greasing, your Imperial Esso Agent has a special offer on Esso MP Grease cartridges and the Esso cartridge gun. This offer is open for a limited time only.

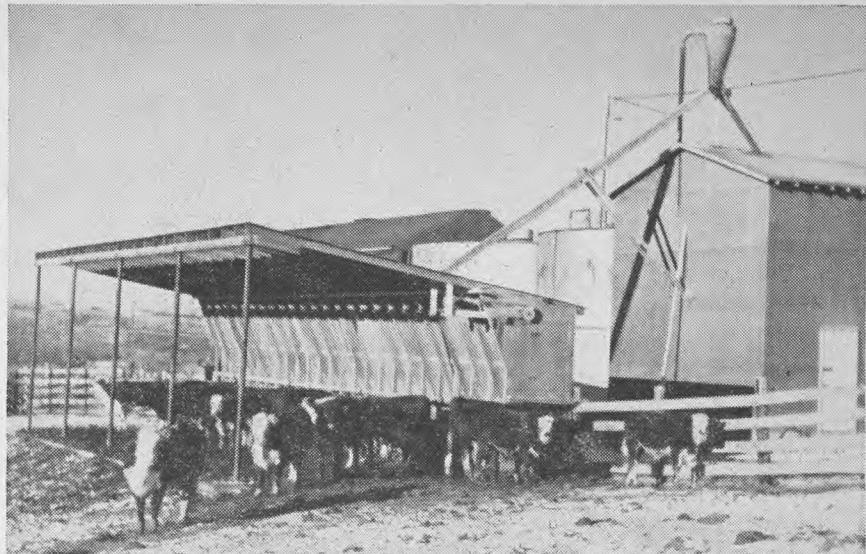


Apply grease gun to fitting. Press lever. Job's done!

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for the best

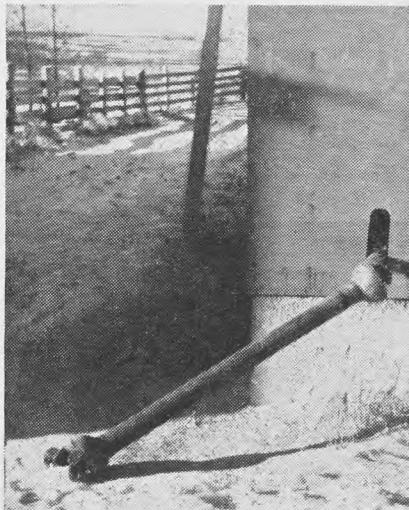


LIVESTOCK

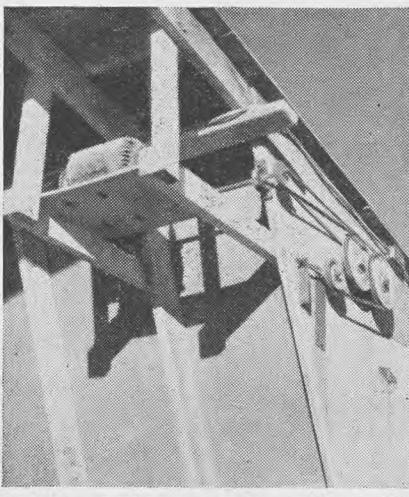


Guide photos

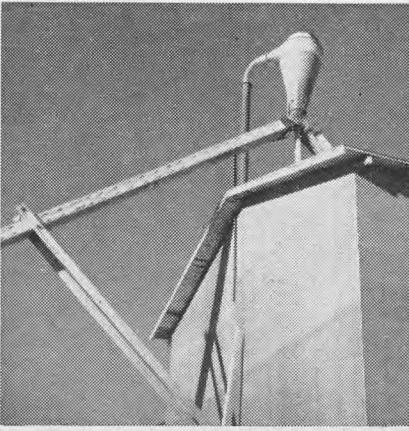
Compact Feeding System



Mill is powered by a tractor which is hooked to shaft protruding from wall.



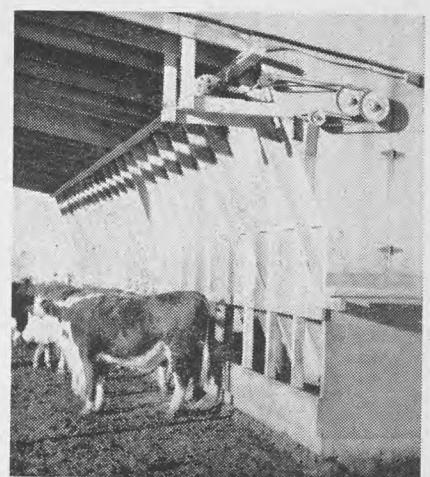
Electric motor operates a feed distributing auger located in feeder bins.



Hopper and chute lead down to feeder.

A GOOD example of how machines are taking the labor out of livestock feeding is seen at the Earl Bergman feedlot near Erskine, Alta. Feed moves from circular metal granaries to a roller mill, via an auger located in a pipe which runs along the base of the granaries.

The feed mill is run from the power takeoff of a tractor which hooks onto a shaft protruding from the building. — Rolled feed is blown into an overhead hopper from where it travels by a chute to the self-feeder. There, an electrically powered auger distributes the grain evenly along the full length of the feeder.—C.V.F. v



Close-up view of the compact feeder.

Circling Disease

A STEER, examined recently by Dr. D. C. Blood of Ontario Veterinary College, was down in the yard and unable to rise. It was blind and had been sick for several days. Earlier, it had circled almost continuously around the yard, standing frequently in a corner with its head against a post, pushing aimlessly.

The steer died. An autopsy confirmed Dr. Blood's earlier diagnosis of listerellosis or circling disease.

This is not a common disease in Ontario, but a few cases are reported every year. Its symptoms are a lot like rabies, and also similar to lead poisoning.

Dr. Howard Neely of O.V.C. recommends isolation of animals that act strangely, and early diagnosis. v

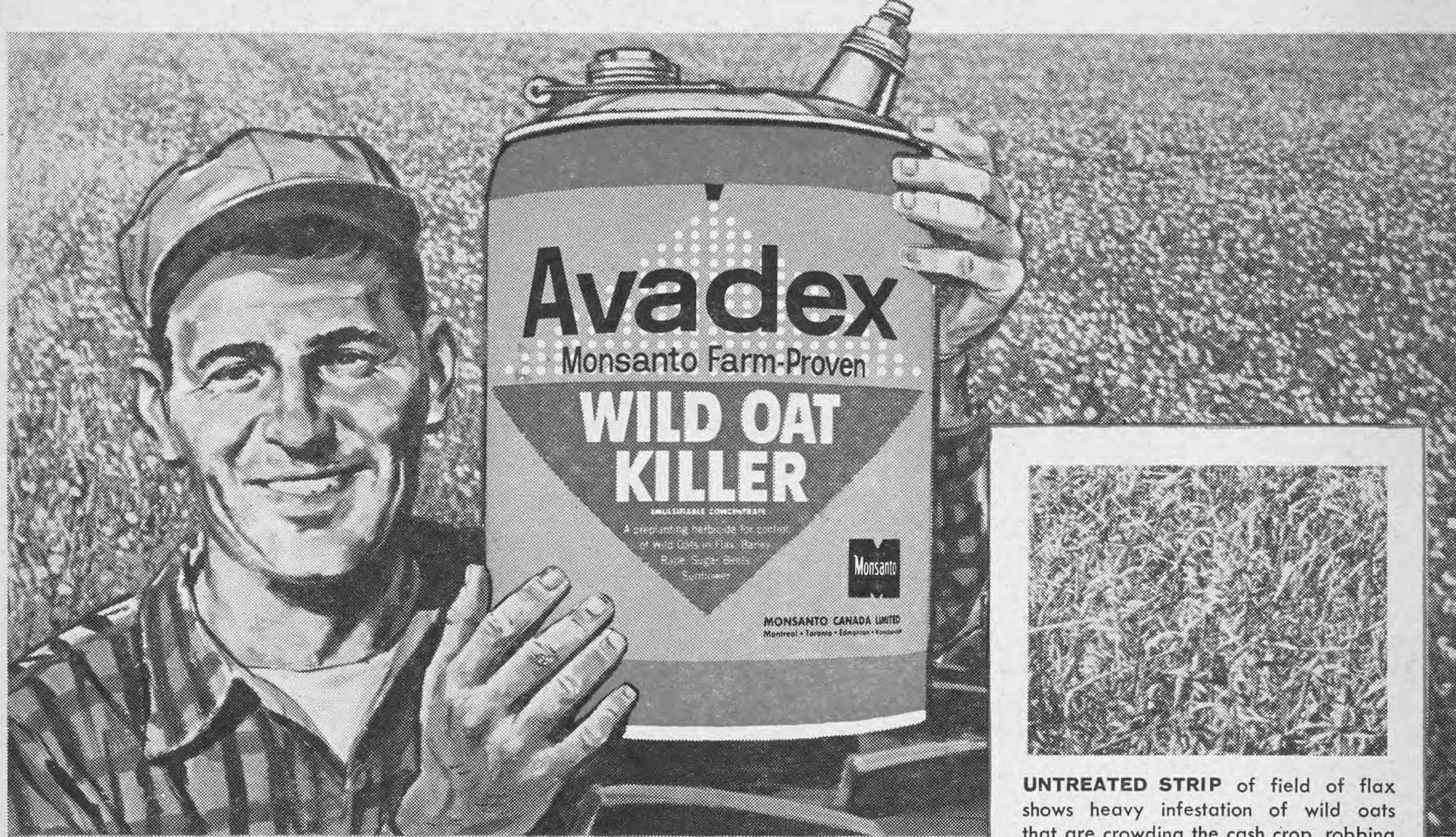
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NEW PRE-PLANTING TREATMENT GIVES YOU MORE PROFIT PER ACRE

Avadex is the selective pre-planting herbicide that knocks out wild oats as they germinate. Sprayed on and disced into the soil before you plant your crop, Avadex stays active over the six-to-eight week germinating period of the wild oat... kills off seedlings as they sprout. Because Avadex remains effective so long, timing of the application is not critical. Delayed seeding is unnecessary. The crop grows over a full season without competition from wild oats for sunlight, moisture and soil nutrients. This gives you a higher yield, better grade—more profit per acre.

UP TO 150% MORE YIELD PER ACRE

In a farm test at Lilyfield, Manitoba, where the wild oat population in an untreated plot was

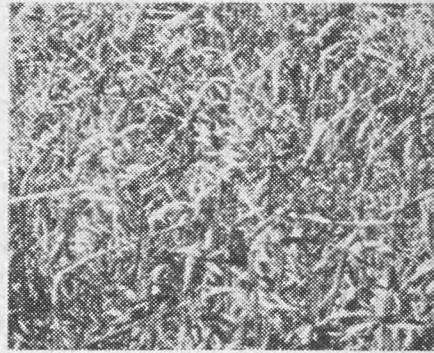
nearly 300 plants per square yard, the flax yield was 6.4 bushels. Avadex-treated plots in the same field yielded 15.4 bushels, an increase of 9 bushels per acre—up to \$27.00 more profit per acre.

90% TO 95% CONTROL ON WESTERN FARMS

Extensive field tests on farms in Canada's prairie provinces showed that Avadex consistently gave 90% to 95% wild oat control at recommended application rates in flax, barley, sugar beets, rapeseed and sunflower under actual growing conditions.

FULL COLOR WILD OAT CONTROL

MOVIE available for farm groups through your local agricultural supply dealer. Ask about showings and make sure you pick up your free Avadex wild oat control booklet.



UNTREATED STRIP of field of flax shows heavy infestation of wild oats that are crowding the cash crop, robbing the soil of water and nutrients, shielding the flax from the sun.



AVADEX-TREATED STRIP gives convincing proof of the efficiency of this selective herbicide in wild oat control. Monsanto Avadex was applied before seeding the crop.

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LIVESTOCK

Jack Buys All His Feed

"**W**HETHER you grow it or buy it, a pound of feed is only worth the going market price," says Jack Paul of Okotoks, Alta. "On our farm, we prefer to buy just about all our hay and grain. I figure I save a lot of time and trouble that way, and my books tell me it isn't costing any more money."

There are about 700 head of livestock on the 154-acre Paul farm, including purebred Hereford cattle, commercial beef, hogs and sheep. As far as the land goes, it's not much more than an exercise paddock, producing only its annual crop of native grasses. Nor would it pay Jack to try to add to his acreage, for land values are high in his area.

"My yearly feed bill amounts to about \$29,000," he points out, "so you can guess how much land I'd need to produce the feed I use. Then there's all the machinery I'd have to buy and maintain, and the labor I'd have to hire. As it is, we've a feed mill close by in town that can grind, roll or pellet grain to order and deliver it right to the feeders."

But the farm does have two valuable assets for a man who wants to raise livestock. An "all-weather" spring gives a plentiful supply of good water, and it has a handy location at the junction of two paved highways.

JACK PAUL has made quite a name for himself as a breeder of top quality purebred beef cattle. This is only natural, as his father was a well-known producer of show stock, and his mother was a niece of Bob Caswell, an outstanding Shorthorn and Clydesdale breeder of his day. In 1955, Jack gained both the Premier Exhibitor and Premier Breeder awards at the Royal Winter Fair, and his "Real Blocky Supreme" was Grand Champion bull there. But the award he prizes most of all is a special citation from the late Lieutenant-Governor, J. J. Bowlen, for his contribution to cattle breeding in the province.

After a career as a fieldman for the production services branch of the Canada Department of Agriculture at Prince Albert, Sask., Jack began breeding Herefords in 1942. The following year he took some of his cattle to the Regina Exhibition, and came away with ribbons for Champion Hereford female, junior and reserve bull and Champion Hereford steer. In 1947 he moved to his present farm in Alberta, and for the next 2 years took the grand championship at Calgary with a bull he'd brought as a calf from Saskatchewan.

A firm believer in establishing and maintaining a breeding "line" of stock, Jack has seldom gone outside to obtain new blood for his herd. His present cattle trace back to a half-brother of the calf he brought from his native province.

Along with this breeding line of



Guide photo
Jack consults with son Jackie, who helps show a lot of the Paul cattle.

cattle, Jack and his wife Dorothy are also establishing a line of experienced stock breeders. The four young Pauls, Gail (18), Jackie (16), Marilyn (14) and Jay (10) have all exhibited championship calves and lambs. Jackie has helped his father show stock for the past 5 years, and took his second trip to the Royal Winter Fair last November.—C.V.F.

Fly Control

DIAZINON can provide absolute control of flies in swine buildings. They treated the barns with this insecticide prior to the fly season at Beaverlodge Experimental Farm, Alta.,

last year, and it was completely successful. Diazinon, like DDT, may allow a build-up of resistant strains of flies in the long run, but has worked well at Beaverlodge for 2 years. □

Iron For Baby Pigs

PREVENTION of baby pig anemia is so simple that the disease should be of no more than historical interest. This statement was made by Dr. Ronald Gwatkin of the Health of Animals Division, Canada Department of Agriculture. Treatment is with iron preparations given by mouth or injected into the muscles.

It has been shown that 0.3 grams of reduced iron—as much as will lie on a dime—prevents anemia if given once a week until pigs are on solid food. The first dose should be on the second or third day after birth, placing it on the back of the pig's tongue with the handle of a teaspoon.

Injectable iron has given better results than reduced iron. Injections are given in the muscles of the hind leg, using two injections of 100 milligrams of iron each. The first should be not later than the third day and the next 10 days later.

Discoloration of the skin after injection can be avoided if the preparation is injected to a proper depth and the skin is drawn down when the needle is inserted, so it moves back and covers the hole in the muscle.

Dr. Gwatkin warns that overdoses must be avoided. Pigs have a good degree of tolerance to iron, but excessive doses cause trouble. □

FROM *Lilly*

SPECIAL HYGROMIX REPORT TO HOG RAISERS

Since Hygromix was introduced in 1957, it has been fed to more than fifty million pigs. While this widespread use has dramatically proved its economic value in worm control, it has also indicated that the product should be used with judgment and care.

Reports from certain hog producers have indicated that the feeding of Hygromix may impair the hearing of a few individual hogs. While these reports have been small in number and have come from less than one out of every 1,000 Hygromix users, they have all been carefully investigated. In addition to this, a comprehensive research program has been launched to probe the hearing characteristics of Hygromix-fed hogs.

The study to date indicates that hearing may be reduced or impaired in some of the pigs fed Hygromix. The reason for this action is not yet known, nor is it known why only certain individual pigs

are affected. It is known that the possibility of hearing impairment is much less if Hygromix is fed within the recommended time limits and dosage levels.

The possible impairment of hearing is not thought to be an important problem in the market hog. It should, however, be carefully evaluated in the raising of gilts and sows for production and breeding stock for sale. Should certain sows be affected they may become less responsive to the squeal of baby pigs. This is not likely to be a problem where protective rails or farrowing crates are used.

While the advantages of Hygromix are many and its use is proved to be highly profitable, some hog producers may feel that, in their situation, the possibility of hearing impairment will outweigh these advantages and, therefore, will elect to feed Hygromix only to slaughter pigs which are going to market.

Remember, no other method of worm control can provide ALL these benefits:

- 1 Hygromix kills more kinds of worms than any other method of worm control—roundworms and nodular worms.
- 2 You can worm as you feed; no extra labor or equipment needed.
- 3 Feed consumption was cut 5.7%, daily gain increased 8.1% in tests conducted at 13 college experiment stations. A benefit of continuous worm control.
- 4 Hygromix offers you a chance to clean up your premises of worm eggs by controlling worm-egg production in the pig.
- 5 Hygromix is easy on the pigs. They do not go off feed during worming, while it kills worms gently.
- 6 Hygromix offers continuous worm protection when the pig needs it most, during its critical growing and developing period.

HYGROMIX®

(*S. hygroscopicus* fermentation products, *Lilly*)

Lilly

Makers of **STILBOSOL®** (diethylstilbestrol premix, *Lilly*)



Twins— Good or Bad?

TWINS are not economical in a dairy herd, according to Dr. J. C. Rennie of Ontario Agricultural College. So he advises a dairymen to pick a bull that has not been throwing twins, if he is to come into a herd where twins are common. Research has shown that multiple births are inherited.

Here are some of Dr. Rennie's reasons for his claim that twins don't pay. One of the most important is the freemartin heifer that can never reproduce. Mixed twins (bull and heifer) occur in about 1 1/4 per cent of all births, and over 90 per cent of the heifer calves are sterile.

There is a higher percentage (5 per cent) of prematurely born and still-born calves in multiple births compared with singles.

The calving interval after twins is usually longer than after singles. This could cut the lifetime number of calves per cow and increase breeding troubles in the herd.

Top producing cows may have twins more often than the lower producers, but recent research in the United States shows only a 3 lb. butterfat advantage for twin-bearing cows. Regardless of the production level, twinning still reduces the butterfat produced in a lactation by about 21 lb. This is the result of extra strain on the cow when she freshens.

Quiz For Dairymen

HERE are some questions and answers on dairy management devised by the Ontario Department of Agriculture:

Q. How many times should a young bull be used for service between 1 and 2 years old?

A. 10 to 15 times.

Q. Which of these legumes won't cause bloat—alfalfa, birdsfoot trefoil or ladino clover?

A. Birdsfoot trefoil.

Q. Should calves be electrically dehorned at 3 months, 4 months or 6 months?

A. 6 months.

Q. If calves show a tendency to diarrhea on high-fat whole milk, should you dilute milk with water, feed skim milk, cut down the amount of milk fed, or increase the amount of dry feed?

A. Dilute milk with water or feed skim milk.

Q. Is the best age to switch from milk or milk substitute to calf starter at 2 to 3 weeks, 5 to 6 weeks, or 10 to 12 weeks?

A. 10 to 12 weeks.

Q. Does good pasture supply enough phosphorus, calcium or cobalt?

A. Calcium.

Q. Do wilted or damaged choke-cherry leaves cause prussic acid poi-

soning, acetonemia or abortion when eaten by cows?

A. Prussic acid poisoning.

Q. What percentage of your calves must be female to maintain the breeding herd size with your own replacements—30 to 40 per cent, 40 to 50 per cent, or 50 to 65 per cent?

A. 40 to 50 per cent.

How to Handle Ringworm

RINGWORM attacks young cattle mostly in the winter and spring. It is a fungus disease and highly infectious. The infection is probably spread from such places as posts or sides of buildings, wherever cattle rub themselves. The ringworm spores can live for years.

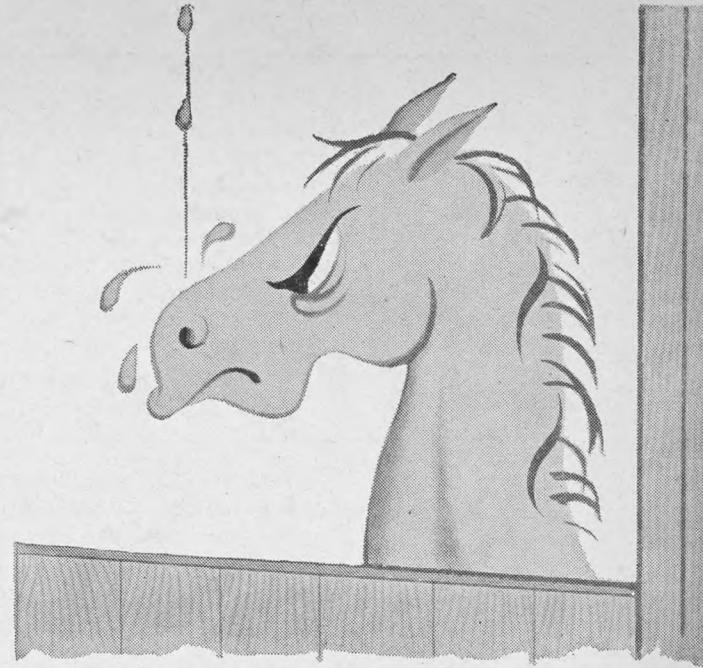
N. E. Stanger of the Manitoba Department of Agriculture says the disease is diagnosed by characteristic scaly areas, unsightly sores on the head and neck, and an appearance like an attack of mange mites.

The treatment: Isolate infected animals during treatment and healing period; remove scales with a stiff brush and mild soap; treat with iodine twice a week for 2 to 4 weeks; see your veterinarian.

Minerals And Butterfat

WHAT happens if you stop feeding minerals to dairy cows in the spring? An Ontario ag. rep., Dick Heard, says a farmer in his district kept a record of how the butterfat content fluctuated with mineral and no-mineral feeding. His cows dropped in butterfat content of their milk when he stopped feeding mineral last June. When he started to feed minerals again in September, the milk test went up.

The actual figures were: January, February and March tested 3.6 per cent; April and May, 3.5 per cent; June, July and August, 3.4 per cent; September, 3.9 per cent; October, 3.6 per cent; November, 4.2 per cent; December, 3.5 per cent.



Don't saddle Dobbin with a leaky roof!

Poor horse. His reward for a lifetime of hard work is rain in the face. Why doesn't the boss get the roof fixed? Even a horse knows that leaks left unattended just get worse. If money's the problem, all that's needed is to apply for a BNS Farm Improvement Loan. A BNS Loan is available easily and quickly for repairing buildings, buying new machinery, upgrading livestock, and many other worthwhile projects.

Don't wait to get your farm in the shape you want it. Visit your Bank of Nova Scotia branch manager soon. Find out how a BNS Farm Improvement Loan can help you.

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BALE ELEVATOR—with or without undercarriage, can be equipped with hinged extension sections and drive couplings, which operate at any angle, to form a highly efficient hay mow conveyor system.

FIELD BALE PICKUP—used with elevator—towed alongside truck or trailer—picks up bales in the field and raises them to truck height. Pick-up can be elevated to 45° to give maximum height for stacking—either in field loading or as a stationary elevator.

NEW POP-UP BALE LOADER—enables 2 men to pick up 100 bales in 20 minutes on any kind of land. Hitched to truck or wagon—ground driven loader operates at any speed—guides bales into position—raises them to platform at top for easy loading.

Write for free literature and name of nearest dealer today.

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DAIRYING

**No Labor to
Grain-Feed These Cows**

TALK about labor saving—every 10 days, dairyman Aubrey Livingstone auger fills a hopper on his combination feed grinder-mix mill with grain. And from there on, the feeding job is mechanical and automatic.

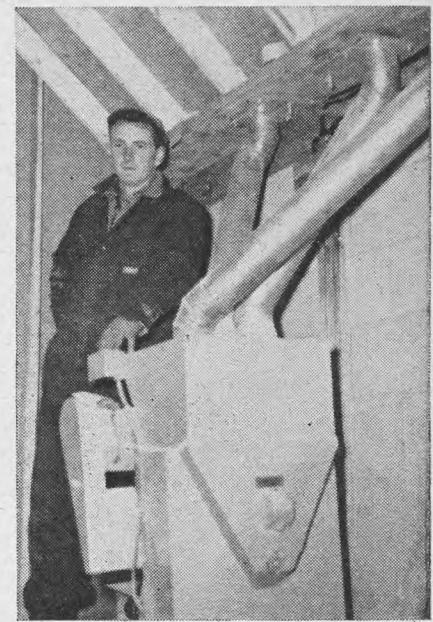
The pelleted concentrate (which is delivered to him in bulk) and the grain are freshly ground and mixed several times a day, augered directly to the milking parlor, and dropped into chutes above the grain box in each milking stall. Only chore left is to meter out the grain to individual cows. It's the most highly mechanized grain-feeding system for a dairy farm we have seen yet. "It's the best system I could find," says Livingstone, "and the cheapest, too."

It's part of Livingstone's brand new loose housing and milking parlor setup which agricultural engineer Ross Milne, of Brampton, helped him design. In lining up the grain feeding system, they located the granary beside the milking parlor, rather than above it. This saved the cost of flooring the area above the milking parlor.

Instead, Livingstone built overhead feed hoppers in the granary, with compartments to handle 1½ tons of oats, and ¾ ton of pelleted concentrate. The two ingredients are gravity-fed into the grinder-mixer, which is adjusted by dials to take the specified proportions. From the grinder-mixer, the feed is augered up over the milking parlor. Cut-outs in the pipe allow it to drop into the chutes over the grain boxes. Once the chutes are full, an automatic switcher stops the process. This machinery will start and stop 3 or 4 times during a milking,

assuring freshly ground feed at all times.

Aubrey Livingstone has a 75-cow dairy herd.—D.R.B. 



Guide photo

Mill takes grain and concentrate from overhead bins, mixes and grinds, then augers directly to the milking parlor.

**New Frozen
Milk Is Possible**

FROZEN concentrated milk could be appearing in stores one of these days. Dairy scientists at the University of Wisconsin have found a way to produce it. They tried it on 200 families, and 80 per cent of them liked it as well as fresh whole milk, 6 per cent liked it better, and 14 per cent preferred fresh milk for drinking.

The manufacturing process begins much the same as for sterilized concentrated milk. High quality raw milk is pasteurized, homogenized and concentrated to contain about 36 per cent total solids. This is packaged in cans and heated. As it cools to 105° care is taken not to shake or mix it, because that would reduce the storage life. The cooling continues and then it is frozen and stored in a freezer at around 10°. It keeps a good flavor for at least 3½ months. Some batches have kept for 6 months, which is the researchers' goal.

The housewife would handle the product much the same as she now uses frozen concentrated orange juice, by thawing out a can and mixing it with two cans of water. 

Smokers' Cheese

A CIGARETTE filter made from cheese and charcoal is entirely practical and completely feasible commercially, says researchers at the University of Wisconsin. This type of filter removes 90 per cent of the tars in cigarettes, it is claimed.

Some idea of what this could do for the American cheese industry is shown by a Wisconsin estimate that 500 million pounds of cheese would be needed annually, if all cigarette filters were made of cheese and charcoal. 



NEW CASE 80 PULL-TYPE COMBINE

Threshes Faster, Cleaner . . .

**Puts More Grain
in the Bin!**

All new—from its big-capacity, high-speed header to the straw spreader—this great new CASE 80 gives you benefits and capacity never before found in a combine of its size.

It gives you smooth, vibrationless performance . . . faster, cleaner cutting . . . more even threshing and more complete separation . . . big, BIG capacity in *all* crops. It gives you a full 7-foot cut, with a sickle speed of 426 strokes per minute . . . and its big, 32-bushel grain bin can be unloaded on-the-go in seconds.

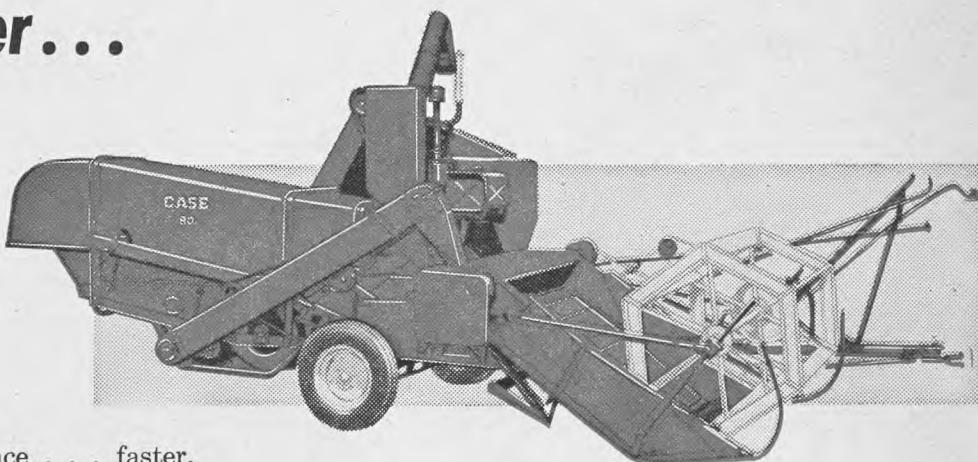
All controls are simple and easy to operate. You can adjust its 4-speed reel from the tractor seat. And the variable speed cylinder and fan drives are easy to change in a matter of seconds to meet *every* harvesting condition.

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NEW CHEMICAL KILLS WILD OATS AS THEY EMERGE

Proven Wild Oat Control
and Better Crop Yield
on Prairie Farm Tests

Wild oat control with Monsanto Avadex* starts before the crop is planted... and extends to cover the long period when wild oats are most actively germinating. Avadex is applied as a spray before seeding and is incorporated into the top three inches of soil by discing the same day as spraying. Wild oat seedlings die as they sprout, while the cash crop emerges unharmed.

On more than 190 acres of demonstration plots on farms in Alberta, Saskatchewan and Manitoba, and in experimental plots at 10 Canadian universities and experimental farms, Avadex consistently gave 90% to 95% control of wild oats at recommended application rates. Typical of the test results were 98% control of wild oats with the application of Avadex and two incorporations on summerfallow ground. A single discing gave 95% control... and at least 90% to 95% control was recorded in all test areas when applied according to directions.

Effective control like this helps the grower improve his yields in two ways: first, the crop develops better without competition from wild oats for sunlight, moisture, and soil nutrients; second, the grower can go to early planting of late-maturing, high-yielding crop varieties. Delayed seeding as a wild oat control measure—never very satisfactory—is now a thing of the past.

Proven on Western Farms

Results on demonstration plots point up the opportunities for profit in wild oat control with Monsanto Avadex. On one farm at Lilyfield, Manitoba, flax yields run 6.4 bushels per acre in untreated fields; and 15.4 bushels in treated plots. At a conservative \$3.00 per bushel for flax, this is a \$5 to \$6 return for every dollar invested in wild oat control. On 10 acres of summerfallow planted to Northland flax at the farm of Forrest Hetland, Naicam, Saskatchewan, Avadex, applied at rates of 1½ to 3 pounds per acre in one incorporation, gave 95 to 98% control of wild oats. Said Mr. Hetland, "at the 1½ pound rate and above, it was remarkable the control we got. The untreated check strips won't yield five bushels to the acre. The strips that we did spray with Avadex could go to 12 or 15 bushels an acre."

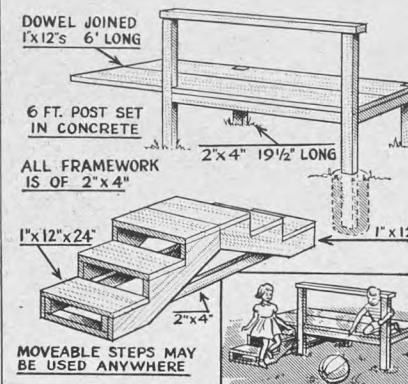
A product of Monsanto, Avadex has been registered for sale in Canada and will be commercially available for the first time during the 1960 growing season through Green Cross Products and the National Grain Company Limited as distributors.

*Trademark of Monsanto Chemical Company

WORKSHOP

Play Equipment

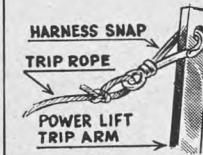
Backyard play equipment can be built this way. For a platform, cut 2" by 4" lumber to the lengths shown in the sketch and set the 6' posts in concrete. The platform top is edge-glued 1" by 12" lumber, with dowel joints every 5". Assemble the platform with sixpenny and tenpenny common nails.



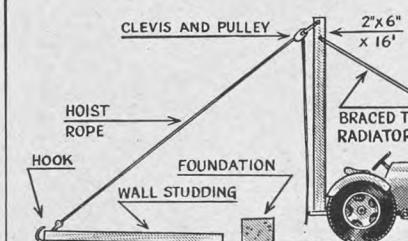
Use a framing square to mark the step carriers, with 6" risers and steps 11½" wide. Use dowels and glue to join the tops of the step carriers, and brace the lower ends with 2" by 4" lumber. Assemble with nails and glue. The step assembly is fastened to the platform unit, and may be moved to either end or used elsewhere in the yard.—R.S., N.Y.

Trip Rope

Although the hydraulic system has replaced most mechanical power lifts, quite a few are still on grain drills. This idea will save buying a new rope every year. It is a snap of the harness type tied to the rope and snapped onto the arm of the power lift. When not in use, simply unsnap and store it in a dry place. The rope will last indefinitely.—W.E.L., Sask.



To Raise Studding



Here is how I managed to erect the 12' studding for my barn, using my tractor. I set a 16' length of 2" by 6" upright on the drawbar and braced it onto the radiator. A clevis and pulley were attached to the top end of the upright, with a rope passed through them. The rope had a hook at one end to pick up the studding and then hoist it to the vertical position against the foundation. After one section was set up, it was only a matter of a minute to drive the tractor ahead and back up to the foundation to raise the next one. With this system, one man can do the work of three.—L.S., Alta.

Lumber Roller

Take a roller from an old washing machine wringer, and two pieces of iron 4" long, 1" wide and ½" thick. Drill a hole through the top end of each, then take another piece of iron as long as the roller and weld the three pieces together as shown in the sketch. Then add another short piece of iron, with a hole drilled in it and weld it onto one end of the frame for securing it to a doorway. Also use a length of 2" by 2" as a brace. When you are sawing lumber in your workshop and taking the lumber from outside, put the lumber over the roller and make it easier for yourself. When not in use, remove the brace and let the roller and frame drop down.—H.W., Man.

Drilling Depth

To drill a hole of a certain depth, wrap tape around the bit, using the edge of the tape to indicate the desired depth.—H.M., Pa.

Straight Cut

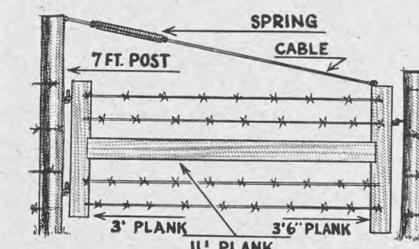
When you have difficulty sawing a board straight on the line, try this. Measure the board to the length you want and mark it. Then add about 1/16" and make another mark (on the waste side). Draw straight lines at the marks and saw between the lines. You will find it much easier to saw the cut straight.—H.S., Mich.

Stripping Insulation

Confronted with the problem of stripping insulation off a wire, I took some old scissors and filed a notch in each blade. The notches must correspond when the scissors are closed. Just place the wire in the notches, close the scissors slightly to cut the insulation, and pull. This peels it off.—L.S., Alta.

Farm Gate

A good gate can be made with fence wire and boards, as shown in the sketch. Basically it consists of three lengths of board—3', 3½' and 11'—joined in an I-shape. Fence wire is strung between the two shorter



boards. A cable and spring from the shortest board to the top of a 7' gate post can be added as a self-closing device. Mount the gate as shown in the sketch.—H.W., Man.



here's

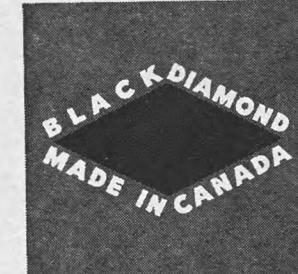
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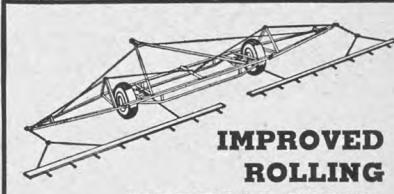
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SOILS and CROPS



New Legume With a Big Future

Trefoil hay enables Bill Berry to fatten his steers without silage and with little grain

LOOKING for a new legume that thrives where alfalfa isn't adapted, on poorly drained, or light droughty soils? One that produces a fine-stemmed leafy hay that is just as nutritious as alfalfa? That is ideal for long-term pasture mixes because it is persistent under grazing, and it doesn't cause bloat? Well, it's available.

It's called birdsfoot trefoil, and when seed became available in quantity for the first time at lower prices in 1959, it caught on with a bang.

"It probably has a place on a field or two of most farms in Ontario — maybe in Eastern Canada," says Prof. Jack Winch, of the Ontario Agricultural College.

But his tempered enthusiasm for the plant is mild compared to the optimism of some growers. Cattleman Bill Berry has 30 acres of trefoil as a hay crop now, and 40 acres of alfalfa. But he doesn't rank it second best to alfalfa or any other crop.

He handles 60 to 70 head of beef cows and young stock on 135 acres of land along the Rideau River near Ottawa. And he calls trefoil the keystone to his program. It's so nutritious, as hay, he can fatten steers without any silage and with very little grain. He calls it ideal to harvest because he can cut the alfalfa first before it becomes coarse and fibrous, then come along to the trefoil that will still be soft and succulent.

"It won't give as many tons of hay per acre as alfalfa," Bill reports, "but the hay is more nutritious. It's an excellent pasture plant too. Last summer, a 7-acre trefoil field carried 6 to 12 mature animals plus some calves throughout the summer, with only two short rest periods.

Couple these advantages with the



Trefoil in a mixture gave heavy hay crop in July and good grazing later, says Pierre Dermine of Kapuskasing.



Bob Hamilton compares a plant from a plot sprayed with 2,4-DB (r.) and a spindly one from an untreated plot.

freedom from bloat," Berry told the Eastern Ontario Soil and Crop Improvement Association, "and I don't see why more people aren't replacing alfalfa fields with it."

(Please turn to page 38)



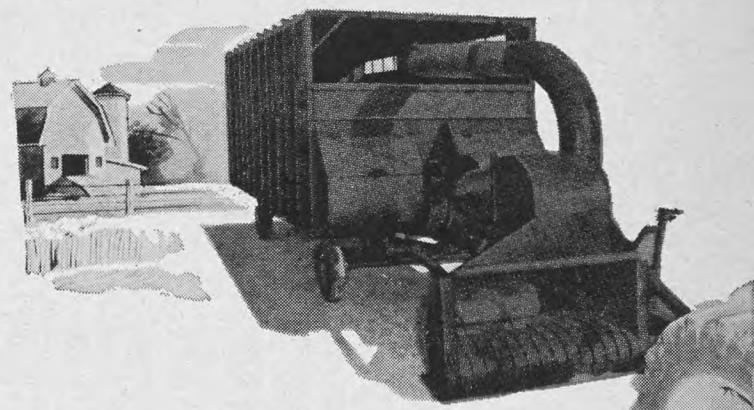
The only problem is that trefoil hay is so good the cattle eat plenty of it, Bill Berry (right) tells Kemptville field crops specialist Doug Parks.



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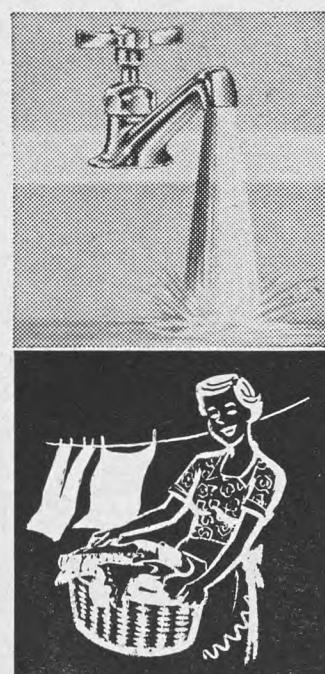
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SOILS AND CROPS

(Continued from page 37)

ACTUALLY, trefoil looks like one new species that is destined to play a big role.

Professor Winch points out that Ontario and Quebec farmers seeded about 160,000 lb. of it in 1959. He toured parts of the province looking at new stands last fall. Of 14 farms he visited in Dufferin County alone, all but one had excellent stands ready for winter. The other was low in vigor because the nurse crop of oats wasn't controlled, and it overpowered and stunted the trefoil seedlings.

The big feature of trefoil, according to Professor Winch, is that it does so well on many fields that won't grow either alfalfa or ladino. And, says Winch, most farms have a low field, some bottom land along the creek, or some poorly drained areas, where trefoil would thrive.

Its value in northern Ontario, where drainage is a problem on most of the land, could be immense, he predicts. In fact, promising results have been

gained with the crop at the Kapsuska Experimental Farm. This year, trefoil is recommended for that area for the first time.

"One thing to remember though," he says. "Don't seed trefoil on fields that will grow alfalfa well. A good stand of alfalfa will outyield trefoil every time. Even ladino is better than trefoil, if you can grow it."

Key to successful trefoil production is how you manage it at seeding time. It's a slow starter if it has much competition. For best results, the field should be adequately fertilized (although the plant will survive on poor soil). Then, says Winch, be sure that weeds, and the companion crop, are kept under control until the seedlings are well started.

Professor Winch says there will be lots of seed available again this year—and he expects more of it than ever will be grown. Suggested rates of seeding have been doubled in the province's recommendations. The suggested mixture this year is 8 lb. trefoil, 4 lb. timothy.—D.R.B. ✓

**Simazin Is Out,
But Atrazine Is In**

New herbicide for corn growers may be key to inexpensive weed eradication

FOR weed control in the corn field this year, simazin is out and atrazine is in. That's the word from Prof. George Jones of the Ontario Agricultural College. He calls atrazine the most promising herbicide to hit the market for some time. It not only does a better job in the corn field than simazin did, but if further work bears out early trials, it might herald the first real breakthrough in "weed eradication" on many fields or farms.

For this year, atrazine should be used just about the same as simazin has been used in the past. It should be applied as a pre-emergent onto a smooth level seedbed shortly after the corn is sown. It is effective against broadleaved annual weeds. At the specified rates, it is not too effective against perennials like twitchgrass.

Atrazine costs about the same as simazin, is more soluble so will be more reliable in a dry year, and its residual effect may not be quite as severe.

"And it is worth using," says Professor Jones. "For even in well-cultivated fields grown for grain corn or silage, weeds reduce yields by 20 per cent."

IT'S the possibilities this herbicide has for the future that have caught Professor Jones' interest. He has applied it experimentally as an early post-emergent, when the weeds and corn were coming up, and got equally good results. He has controlled twitchgrass effectively with it, while still growing corn, by applying at higher rates. He has even disked the herbicide into the ground, rather than leaving it on the surface, and still got a good weed kill.

He says this opens up real possibilities for the future. It might mean that a person could apply it at about 8

pounds per acre while seeding a weedy field to corn, and continue cultivating the corn during the summer to encourage germination of all the weed seeds in the ground. Every seed that germinated would be killed. No seeds would be returned to the field.

"You would have to grow corn in the field the following year as well, because of residual effect, maybe with the addition of a little more atrazine to complete the weed eradication," says Professor Jones. "But you would wind up with a clean field, while producing a crop on it every year. It could save years and dollars in cleaning up weedy land," says Jones.

"If further experiments bear this out, it could mean that a person could clean up a weedy field, or a weed-infested farm, in a couple of years, and never take it out of crop," he says. "For even when heavy rates of the herbicide are applied (at a cost of about \$30 per acre, which would be reasonable considering the costs of other methods of weed control) corn can still be grown."—D.R.B. ✓

**Calculating
Irrigation Efficiency**

AN inefficient system can add greatly to irrigation costs. Here is a convenient way to judge whether your water losses are reasonable or excessive:

Suppose one of your fields needs a 3½-inch depth of water to fill the plant root zone. We know the soil can't hold more than this amount, but to replace this 3½ inches you find you must put on 5 inches of water. Your application efficiency would then be $3\frac{1}{2} \div 5 \times 100$, or 70 per cent. Your loss would be 1½ inches, or 30 per cent. ✓

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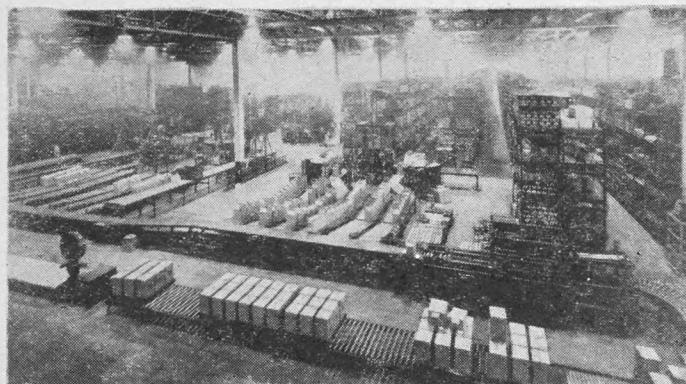
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Fifty years ago, when Stelco was incorporated, the distributors, or wholesale merchants as they were called, had relatively few products to handle. Today their work is far more complex and even more important. By collecting the thousands of small orders from retailers, the distributors make it possible for manufacturers to produce in larger, more economical quantities.

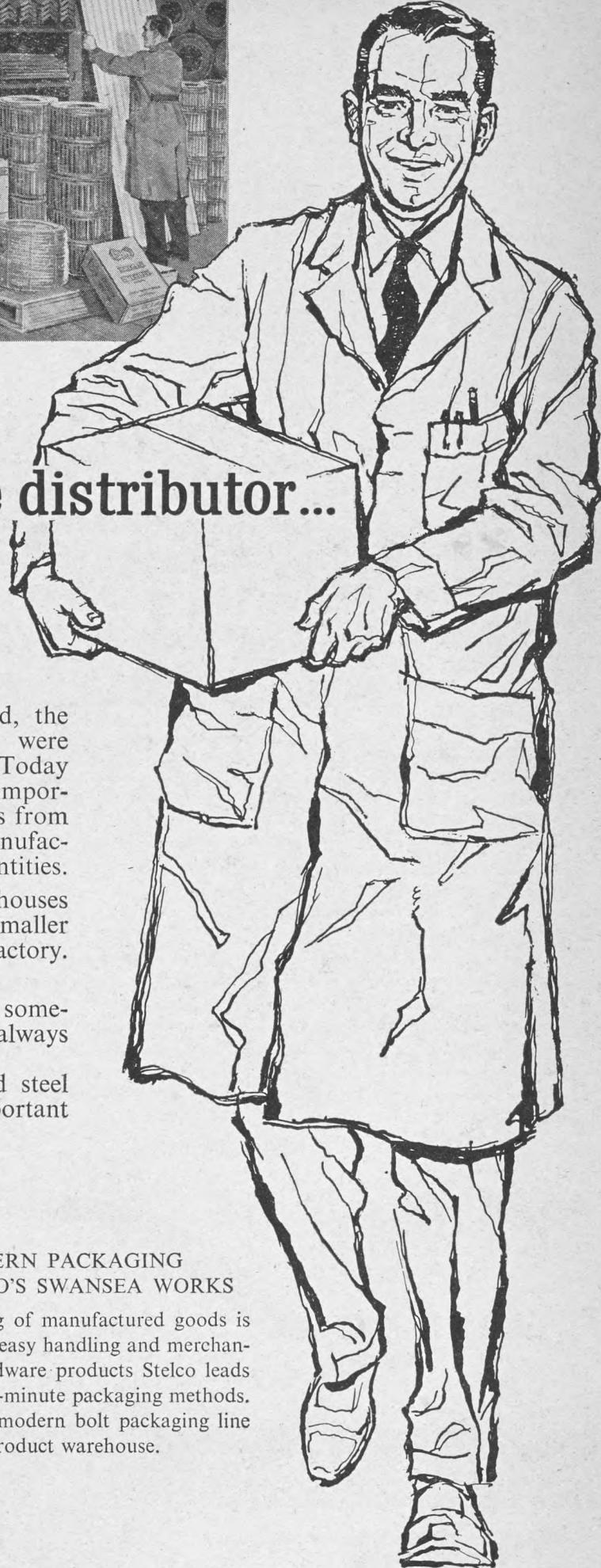
At the same time distributors, from their warehouses across the country, can service the retailers' smaller orders faster than the manufacturer can from the factory. Steel plays a "round-the-clock" role in this job.

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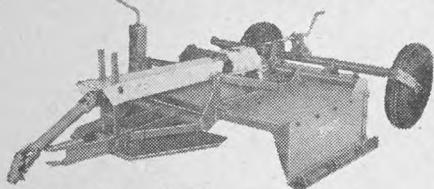
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SOILS AND CROPS



A seed production plot of Sodar, a variety of streambank wheatgrass, grown at the Swift Current Experimental Farm. These rows are seeded 3 feet apart.

New Grass for Soil Protection and Stabilization

by TOM LAWRENCE
Swift Current Experimental Farm

ONE of the newest grasses to be licensed in Canada is a selection of streambank wheatgrass named Sodar. It came from Pullman, Wash. The plants are rather short and have relatively narrow, smooth leaves. It will grow about as tall as Fairway crested wheatgrass and forms a smooth, dense sod rapidly, but can be eradicated easily. The seed is slightly larger than Summit. Seedlings develop easily.

Sodar is drought resistant, winter hardy and long lived. It is a special purpose grass used primarily for soil protection and stabilization, rather than for hay and pasture. In roadside ditches, machinery yards, farmyards, sports fields and school yards it wears

well, produces a relatively small growth, develops few seed stalks and survives under unfavorable conditions.

The main advantage of this streambank wheatgrass over crested wheatgrass and Russian wild rye for these special purposes is that it does not clump, but forms a smooth sod. It is also ideal for private airplane landing strips and non-irrigated golf fairways.

As a low-growing cover for ditch banks, canal banks, dikes and spillways, Sodar is highly competitive with weeds. It does not grow as rank as brome or reed canary grass, produces less seed and needs less maintenance. It can also form a dense protective cover rapidly for stabilizing

rangelands where wind or water erosion prevails. Another use is for gullies and waterways, and it is ideal for waterways that are crossed by machinery and not cut for hay.

Tests of the durability and persistence of Soda wheatgrass at the Swift Current Experimental Farm, Sask., showed Soda is equally as persistent as crested wheatgrass and Russian wild rye, and more persistent than brome and intermediate wheatgrass.

In Test 1, the compositions of the stands 6 years after seeding in rows 12-in. apart were: streambank wheatgrass 88 per cent, weeds 12; crested wheatgrass 86, weeds 14; brome 83, weeds 17.

In Test 2, 5 years after seeding in rows 12 in. apart: streambank wheatgrass 93 per cent, weeds 7; crested wheatgrass 99, weeds 1; intermediate wheatgrass 77, weeds 23; Russian wild rye 98, weeds 2.

SODAR is primarily for efficient ground cover, but is a useful forage crop. It has produced about as much dry matter as Russian wild rye, but considerably less than crested wheatgrass, intermediate wheatgrass and brome. Dry matter yields in Test 1 at Swift Current in pounds per acre were: streambank wheatgrass 580, crested wheatgrass 850 and brome 710. In mixture—streambank-alfalfa 1,630, crested-alfalfa, 1,890, brome-alfalfa 1,680.

In Test 2: streambank wheatgrass 940 lb. per acre, crested wheatgrass 1,490, intermediate wheatgrass, 1,670, Russian wild rye 950.

These yields show that Soda streambank wheatgrass should not be seeded for hay or pasture, but some forage may be obtained for stands for soil protection and stabilization. Because of the relatively low production, pasturing would probably be the best method of harvesting.

Sodar should be seeded in a well-prepared seedbed. In areas with ero-

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SOILS AND CROPS

sion, such as gullies, delay seeding until the spring runoff is over, but fall seeding is not recommended. Seed with a drill at not more than 1 in. deep, in rows spaced 6 in. apart and at 8 lb. per acre. Seed in two directions, at right-angles, for a heavy stand.

For seed production, sow Soda in rows 36 in. apart at 3 lb. per acre. Two or three rows of wheat may be sown between the rows of grass as a cash companion crop during the year of establishment. As with most sod-forming grasses, seed yields drop rapidly after the first crop. To maintain seed production, annual applications of 100 to 150 lb. of 33.5-0-0 fertilizer per acre are needed. An average of about 150 lb. of seed per acre may be expected in southern Saskatchewan.

A good supply of Soda seed is available in Washington, Oregon and Idaho. A number of Saskatchewan seed growers have established the Soda wheatgrass and a considerable quantity of seed should be available next fall. V

Strip Crops Can Yield More

STRIP cropping, used correctly and in the right places, has shown that crop yields were increased through holding soil in place and conserving moisture.

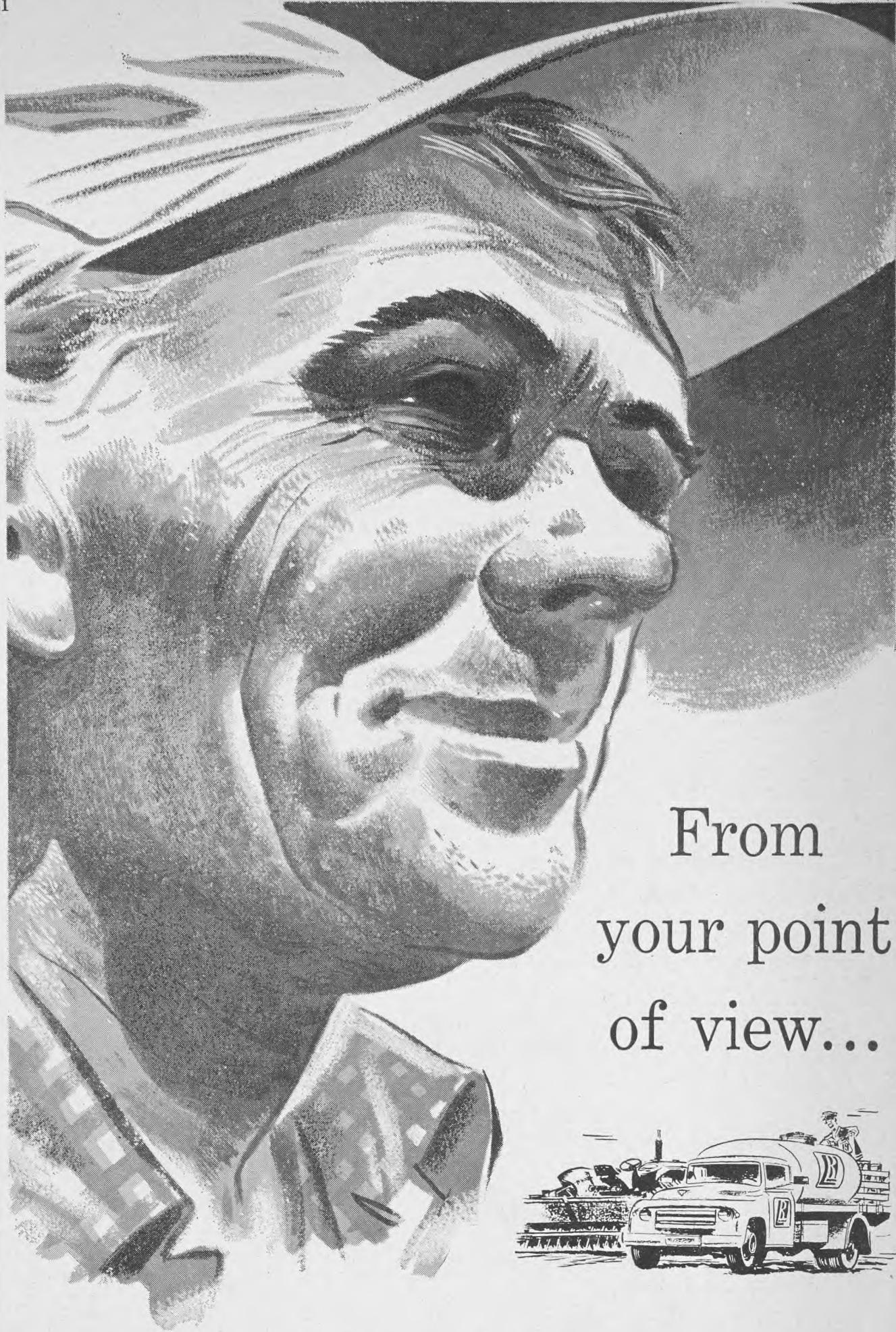
A. D. Smith, writing in the Lethbridge Research Station letter, says that where strip farming is being used to control soil drifting, the strips are laid out at right-angles to the prevailing wind. When correctly used this has helped to prevent the wind carrying soil away. But if the problem is serious water erosion, thought should be given to laying strips on the contour.

In contour striping, the direction of the strips is set by the lay of the land. Strips run across the slopes or along the points of equal height throughout the field. When these points are joined together they form contour lines, which become outlines for the strips. The steeper slopes form the narrower parts of the strip, and the more gentle slopes form the wider parts. The result is that strips are not straight lines, nor do they follow contours exactly, but as closely as practical without curving too abruptly. However, if slopes are uniform, the strips are parallel.

Mr. Smith points out that strip cropping is not practical on all farm land. In some cases the land is too level or too rough, and annual precipitation is too low, to justify it. But there are areas in Alberta where water erosion could be greatly reduced by contour strip cropping, and in such cases it is worth talking it over with the District Agriculturist. V

To Seed Forages

BEST way to establish a good hay or pasture stand, according to the Ontario Agricultural College forage specialists, is to seed it with a companion crop of 1 to 1½ bushels of oats per acre. Pasture the oats off or remove them for silage, when they are 12 to 15 inches high. V



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SOILS AND CROPS

Comparative Costs of Sprinkler and Surface Irrigation

ALTHOUGH there hasn't been much work done on this in Canada for several years, a report issued by the Sprinkler Irrigation Committee for Western Canada in 1950 is available for use as a guide. Anyone considering the installation of an irrigation system today will have to bear in mind that labor and equipment costs have risen considerably in the past 10 years. Soil type and farm topography will have to be taken into account too. Obviously where land requires a good deal of leveling before furrows or flooding methods can be used, the cost factor will swing in favor of sprinklers and vice versa.

The Committee based its comparison on the basis of total annual cost, including interest and depreciation. Calculations were made on both cost per acre-inch and cost per acre. Depreciation of sprinkler equipment was based on the replacement value in the year of operation. Interest was calculated at 5 per cent of the total investment in pump, power unit and distribution system, based on the market value of that year. In other words, the farmer's estimate of what he could get for the system at auction sale or trade-in prices.

For calculating fixed charges, the following standards of life expectancies were used:

	Underground pipe	10 Yrs.
	Electric motors	20 Yrs.
	Internal combustion engines	10 Yrs.
	Sprinkler heads	4 Yrs.
	Portable pipe and pump	
(a) for supplemental		
sprinkling		20 Yrs.
(b) for irrigation		
farming		15 Yrs.

Power costs at the time of the survey were as follows:

Gasoline	30¢-70¢ per acre-inch
Diesel oil	25¢ per acre-inch
Electricity	12¢-14¢ per acre-inch
Oil	2¢ per acre-inch

Labor costs (calculated at 75¢ per man hour) range from 22¢ to \$1.36 per acre-inch, and average 46¢ per acre-inch. Repair costs on the complete system were figured at 20 per cent of the labor cost of moving laterals.

INVESTIGATIONS by J. C. Wilcox of the Summerland Experimental Farm in B.C.'s Okanagan Valley show that the average cost of installing an adequate fluming system in that area for applying 36 inches of water a year by the furrow method was about \$75 an acre. At that time, comparative costs for sprinkler installations there were \$130 per acre if a pump was needed, and \$100 an acre under gravity flow. The average

sprinkler application was around 30 inches a year, or 6 inches less than the furrow method.

The annual costs of operating these systems was given as:

	Furrows	Sprinklers with Pump	Sprinklers minus Pump
Electricity		\$ 4.00	
Labor	\$21.00	15.00	\$14.00
Depreciation	5.00	11.00	8.00
Interest	2.50	4.00	3.00
Repairs	3.00	3.00	2.00
Totals	\$31.50	\$37.00	\$27.00

Average cost per acre-inch	90¢	\$ 1.23	90¢
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In assessing these costs, however, it must be remembered that in some parts of Canada, where the land is fairly level and the soil heavy, cheaper earthen ditches could be substituted for flumes. Also, that furrow or flooding methods might entail certain "hidden costs" such as lowering your soil's productive capacity through soil erosion or accumulation of harmful salts. There might even be lawsuits resulting from seepage or tailings damage to neighboring farms.

Surveys made by the Lethbridge Experimental Station and the Federal Economics Division in 1949 showed that the initial cost of sprinkler systems used in irrigation farming varied from \$3 to \$10 per acre-inch of water applied, but mainly around the \$4 mark. On the basis of 12 inches of water per acre, the initial cost for equipment amounted to about \$48 per acre. The cost of applying it, including capital charges and operating costs, ranged from \$1 to \$3 an acre.

acre-inch, depending on the amount of water applied and the kind of power used. If 12 inches was applied during the season, the *minimum* cost would be about \$12 per acre.

Where used to supplement dryland farming, the initial cost varied from \$5 to \$10 an acre-inch, or from \$20 to \$40 an acre on the basis of 4 inches of water applied.

In comparison, the cost of putting on water by surface irrigation can vary from 15¢ to 40¢ per acre-inch, depending on the uniformity of slope and the size of water head that can be used efficiently by one man. Under average conditions, the cost of surface irrigation was found to be around \$3 an acre. But it can be twice this amount or more on very steep slopes where only very small water heads can be used.

THE crops to be grown will have a bearing on your choice of an irrigation system too. Sprinkler irrigation shows greatest promise for the higher-priced crops such as sugar beets, vegetables, fruit, seed crops and, in some cases, pastures. A crop which gives an annual return of \$100 an acre has been suggested as the minimum for sprinkler irrigation in the northwestern United States. Sprinkling a wheat crop isn't considered a paying proposition unless the price of wheat is at least \$2 a bushel.

If you decide to buy a sprinkler system, it'll pay you to get one designed to fit the field or fields you want to irrigate. Avoid package deals. Because of the high cost of

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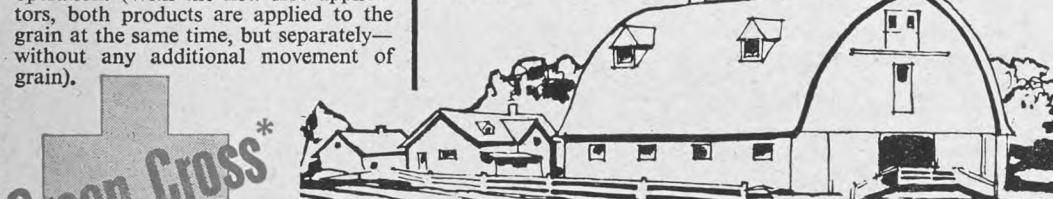
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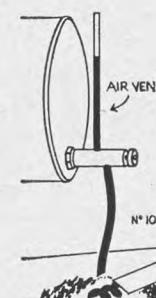
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SOILS AND CROPS

this equipment there's a tendency to underestimate the required capacity that you'll need. Remember, a system should be designed to deliver the water needed *during periods of maximum use*.

Under western conditions, the time between irrigations shouldn't exceed 20-21 days. Your system must be designed to cover the area to be irrigated in that time. This requires an outfit that'll deliver a bare minimum of 6 gallons per minute per acre, based on 20 hours of operation per day and a 6-day week. Allowances must also be made for breakdowns, times when water might not be available, and such things as pressure of other farm work.—C.V.F. ✓

Formula for Water Application

IN order to apply water correctly, an irrigator must know four quantities, states the USDA Soil Conservation Service: (1) the number of acres in his field, (2) the depth of water he wishes to apply, (3) the size of the irrigating stream in cubic feet per second (c.f.s.), or gallons per minute, and (4) the length of time the water must run.

If you know any three of these quantities, you can figure out the fourth by using the following formula:

One cubic foot per second for 1 hour = 1 inch depth of water on 1 acre (one acre-inch).

For example: If you wanted to find how long you should run a stream of 3 cu. ft. per second to apply 5 inches of water to your 15-acre field, you'd do it this way:

1 c.f.s. for 1 hour = 1 acre-inch
3 c.f.s. for 1 hour = 3 acre-inches
5 inches x 15 acres = 75 acre-inches needed.

Therefore, I need to irrigate $75 \div 3$ or 25 hours.

Another example: You might want to figure how many inches you've applied when you've run a stream with a volume of 4 c.f.s. on 8 acres for 10 hours. Then you'd say:

1 c.f.s. for 1 hour = 1 acre-inch
1 c.f.s. for 10 hours = 10 acre-inches
4 c.f.s. for 10 hours = 40 acre-inches
 $40 \text{ acre-inches} \div 8 = 5 \text{ inches of water applied}$

If your irrigation stream is measured in gallons per minute (g.p.m.) instead of cu. ft. per second, you can figure how many c.f.s. you have like this:

cu. ft. per second = gallons per minute $\div 450$

Example number three: A pump test shows that you're getting 675 g.p.m. from your well. Then:

cubic feet per second = $675 \div 450 = 1.5 \text{ c.f.s.}$ —C.V.F. ✓

Just Wet Enough

AN efficient water application means confining the wetted area to the crop root zone in irrigation. If too much water is put on, the soil is wetted beyond the root zone and the water is wasted. Too light an irrigation means the soil is wetted to capacity only in the upper portion of the root zone. ✓

Short Guide To Irrigation

APPLYING water to land is a scientific business. The principal system listed below should serve as a useful guide.

1. *Border or Strip Irrigation* consists of flooding a field which has been divided into a number of strips 30 to 60 feet wide and 300 to 1,300 feet long, which are separated by low ridges or dikes. Bordered strips may run down slope or be laid out on the contour. They are generally designed so the required amount of water has been delivered to a strip by the time the water reaches the far end. If on level land, the diked strip is merely flooded to the desired depth.

2. *Furrow irrigation* is often used for row crops such as potatoes, corn, fruit and vegetables. The water is applied in the furrows made by cultivating between the plant rows. Furrows may also be run directly down slope or on the contour. Care must be taken to prevent the water from overtopping the furrows and breaking them.

3. *Sprinkler irrigation* applies water in much the same way as natural rainfall. Land that is too shallow, steep or rolling to be watered by surface methods can be effectively irrigated with sprinklers. It is particularly adapted to sandy soils which take water rapidly. Sprinklers have certain limitations, however. Water distribution is affected by wind, and power requirements are generally higher than for other methods. A sprinkler system will give years of good service if it has been designed specifically to fit the conditions on your farm, and is properly operated and maintained.

4. *Subirrigation* requires complete control of the elevation of the water table so the plant root zone can be continually supplied with moisture from below, and the soil still kept free of excess water. This is generally done by maintaining a system of field laterals. The topography of the land should be smooth, uniform and about parallel to the water table.—C.V.F. ✓

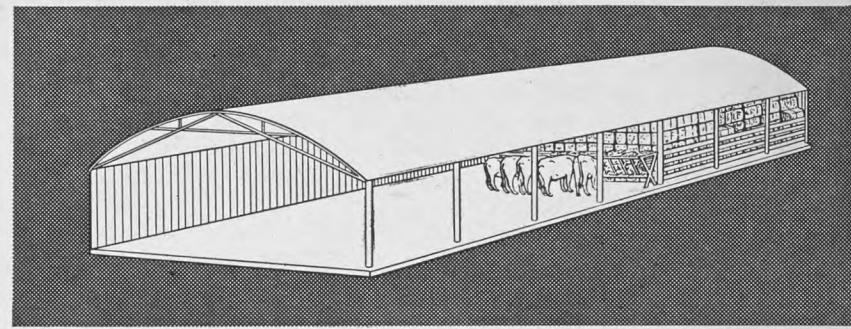
How to Keep Water Clean

ALL irrigation systems that are fed from an open ditch, river channel, lake, or other source where debris may collect, should be equipped with a trash screen. If the water carries sand or silt, a settling basin may also be needed.

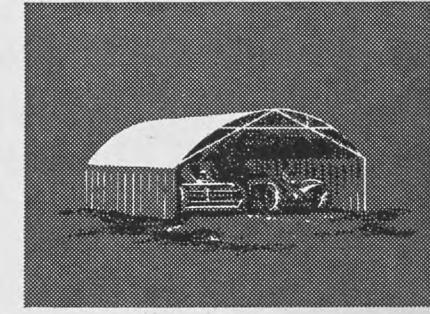
Where a water source, such as a turnout box, is at a high enough elevation to provide a foot or more of drop you can generally install a self-cleaning screen. This entails placing a fine mesh screen in such a way that the falling water washes the trash toward the end of the screen, from where it falls on the ground. However, a screen should be installed even if there isn't enough fall to make it self-cleaning.

Debris from screens should be collected and burned to destroy weed seeds. If spread over your fields, these seeds could cause you a lot more trouble and work than the simple task of cleaning a screen. ✓

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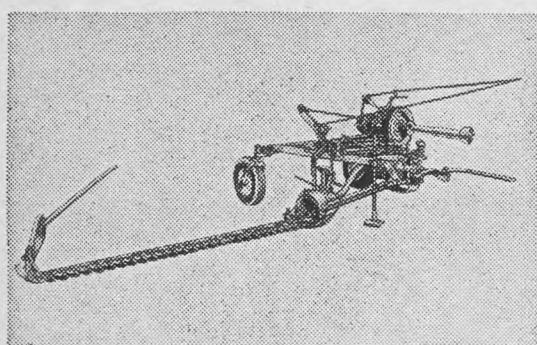
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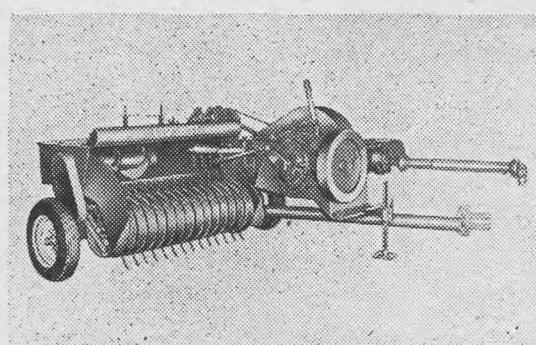


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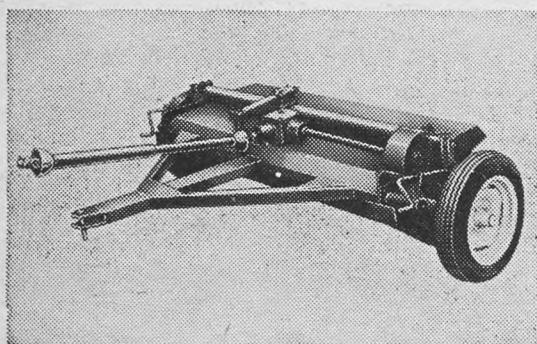
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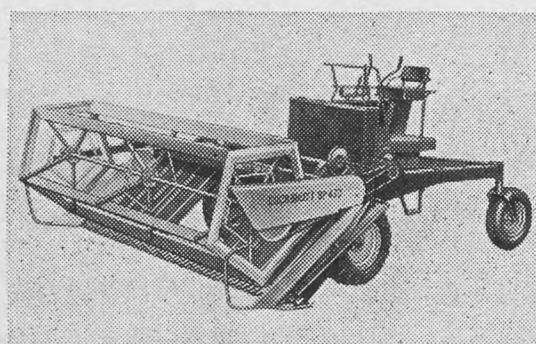
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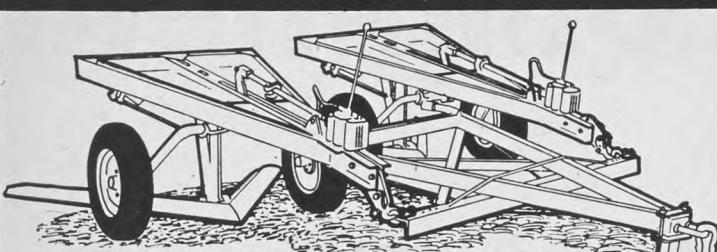


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Okanagan grower is
happy about result

Controlled Growth With a Shavings Mulch

by JESSIE H. HILL

ALEX BELL is a farmer with vision and experience. He says: "I've been experimenting with shavings mulch for about 4 years now, and it results basically in controlled growth."

He started using sawdust in the beginning, but ran into several difficulties. "In the first place, I found sawdust had a tendency to mix in with the soil, and although there were some advantages, this was a serious problem," he said. "Then sawdust was too expensive. I mentioned it to a friend who works at the local sawmill and he suggested I try shavings. I tried them and the results have been increasingly gratifying."

Alex first used shavings mulch on his strawberries. Here is what he has to say about the results.

"Ideally, shavings should be spread over the area to be planted at a depth of about four inches, after first applying a good nitrogen fertilizer. Next scrape away the shavings in rows, plant strawberries as usual, and spread the shavings close to the roots of the plants.

"They prevent weeds from growing, and eliminate hoeing and weed-

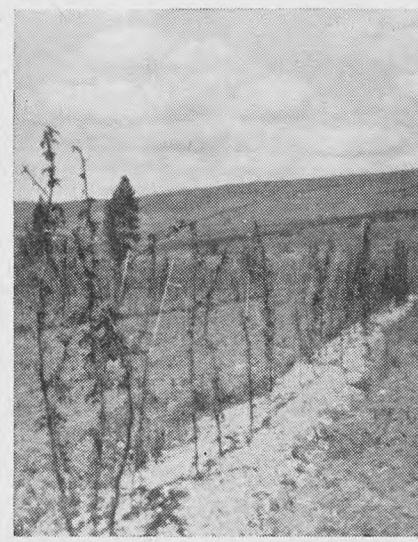


Good growth of rhubarb in shavings.

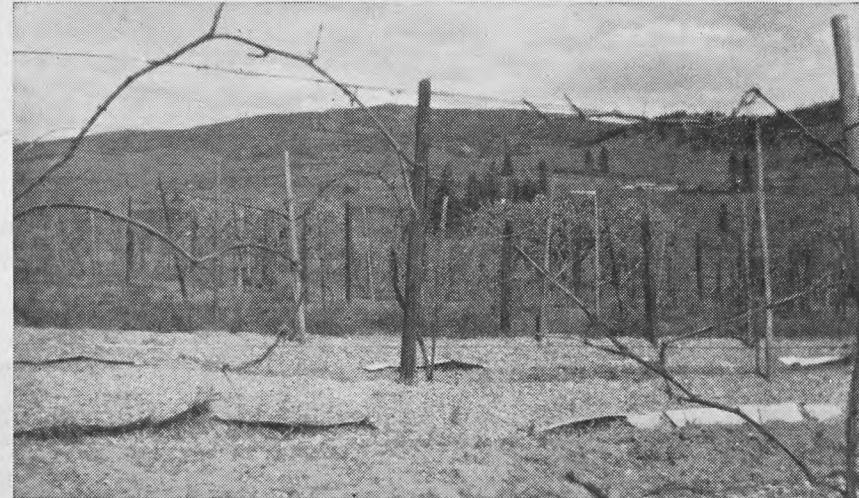
ing entirely. They also conserve moisture, a very important feature in the dry climate of the Okanagan Valley. Runners are prevented from rooting, and I have now developed a strip planting method whereby instead of planting new patches each year, new rows are started in the same patch." Says Alex: "First I scrape away the shavings to form new rows between the established rows. Then runners are allowed to take root. They are then detached from the parent plant and shavings scraped back around them. When parent plants are through bearing they are pulled out. This process can be continued for a number of years. The fruit from these plants is excellent and exceptionally clean even after a heavy rain."

Another good feature of shavings mulch is that during a very wet season they will not mildew as straw mulch will.

ALEX next tried shavings on potato tops. The results were somewhat remarkable. The seed was planted in the soil as usual, shavings covered them to a depth of four inches. The plants grew up through the shavings with ease. This is also true of rhubarb



Young raspberry canes have a mulch.



Couch grass in a vineyard is smothered by shavings mulch over cardboard.

HORTICULTURE

and other coarse-leaved, thick-stemmed plants.

"Here is the funny thing about potatoes," he told me. "The tubers form in the shavings on top of the soil. The result is smooth skin, uniform shape and clean tubers. During the growing season I often reach in under the shavings, pick off the biggest tubers and leave the smaller ones to continue growing. It sure increases the yield too."

Regarding other vegetables such as peas, beans and cucumbers, they break through two inches of shavings, and more can be added as they grow in height. Carrots, parsnips and similar vegetables must be allowed to grow to a height of two inches before shavings are scraped close to the roots. Thinning is usually done at this time. For tomatoes, cabbages, etc., simply scrape away enough shavings to plant the seedlings, and then scrape them back.

Of his experiments with fruit trees Alex says the best plan is to pile shavings to a depth of about six or eight inches and about three feet in diameter around each tree. He used to put wire mesh around the young trees to guard them from mice. However, since he has never found a mouse-nest in shavings he discontinued it.

When trees are protected in this way, hoeing around each tree is unnecessary, moisture is conserved, and in very severe winters root stock is protected from frost damage.

Alex figures that even in a climate as dry as the Okanagan Valley it would be possible to farm without irrigation if the shavings were spread over the land in the fall to a depth of three or four inches, and allowed to remain all winter. The moisture would not dry out in the spring.

It is never necessary to remove shavings. Nitrogen fertilizer is applied on top of shavings each spring. Further applications of shavings may be added from time to time as needed to keep them at required depth. After 4 years Alex says the first ones he used are just beginning to show signs of decomposition.

Shavings have proved very effective in weed control. He spreads shavings at a depth of from six to eight inches on couch grass. This causes the root stock to come above the ground, as with the potatoes. Then with the spring tooth cultivator set to just clear the soil, the couch grass is easily dragged on top of the shavings to dry out and die.

In areas where the cultivated crops are too close to allow this method he is spreading strips of brown paper and cardboard over the couch grass, covering it with shavings, and figures this will smother the pest. In time the paper will rot. This is still in the experimental stage.

Areas infested with bindweed are covered with four inches of shavings. When the weeds grow up through the shavings they are sprayed with a commercial weed killer. This is repeated as necessary through the summer. By the following spring the ground is all ready for planting.

ALEX is able to get an almost unlimited supply of shavings from the local sawmill at a nominal cost but in areas where they are not avail-

able he believes a shredder or chipper could be used on a do-it-yourself basis. He finds fir, the coarser the better, the most satisfactory. However, farmers in other parts of Canada wishing to try this method of farming would have to experiment with shavings from local trees.

In these days of high cost labor he finds that he can handle his work with only occasional hired help, as in picking time. Since weeding, hand hoeing, and similar jobs are practically unnecessary, the saving in labor is tremendous.

Looking to the future Alex says: "I

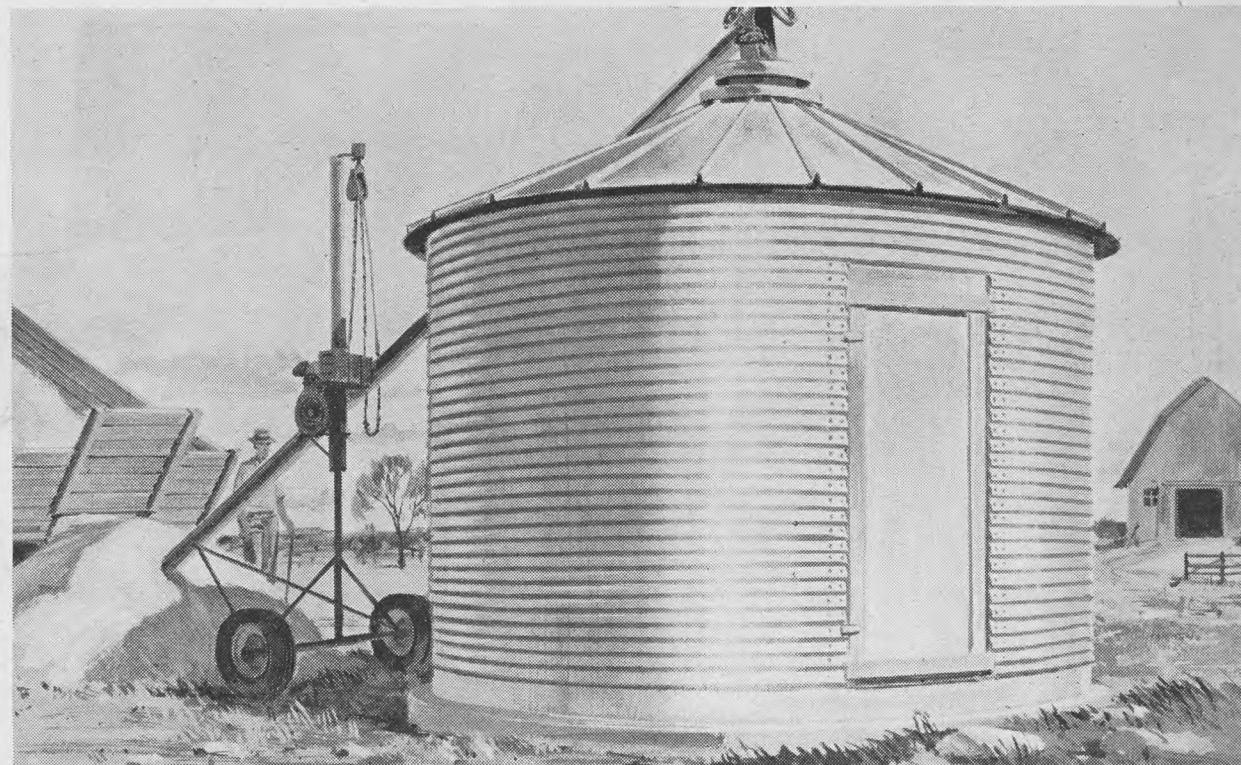
believe the possibilities in farming with shavings mulch are almost unlimited. I'd sure like to see a club formed among local farmers so that each could experiment along different lines. Then we could pool our findings and profit from each other's experience."

At first the local people were hesitant to try this method but several are beginning to give it a trial, and all are amazed at the results. Looks as if that club may not be very far off. In the meantime Alex Bell is continuing to experiment and profit, farming with shavings mulch. V

KEEP STORED CROPS AT PEAK MARKET CONDITION

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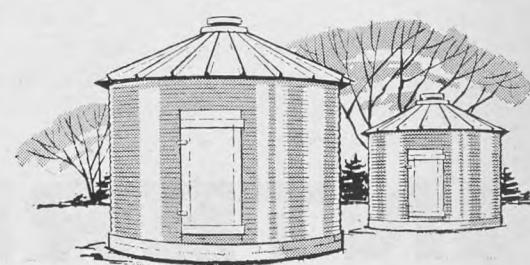


Spoilage can rob you of the profits you work so hard to earn. With efficient crop storage you can actually increase your profits. You can harvest when the crop is perfect—sell when the price is right.

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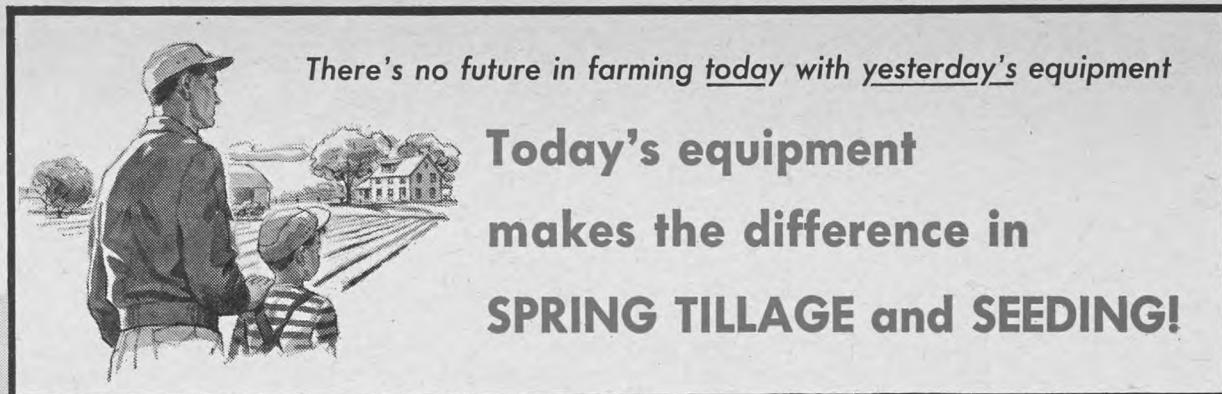


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Six-cylinder
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POULTRY

Dollars - and - cents report
for Canadian poultrymen

Random Tests Help Small Poultry Breeders



Ralph Raynor's high-scoring Rhode Island Red-Leghorn crosses in test pens.

RALPH RAYNOR isn't as frightened of the big poultry breeders and hatcherymen as he used to be. After all, the birds that he is breeding himself have done just as well as those from most flocks on the continent.

He found this in the random sample tests carried on in recent years at the Central Experimental Farm at Ottawa. More than any other single event, these proclaim the championships of the Canadian poultry world now. Poultry breeders from across the country send eggs from their flocks to Ottawa for the test. The eggs are hatched and the pullet chicks are reared and put into laying pens.

Just about every important characteristic that can help to make money for commercial poultrymen is measured during this time. On completion of the test, results are reported showing, in dollars and cents, just how well each lot of birds did.

Raynor has entered his birds for the past 3 years. They placed eighth twice and ninth once, to show a remarkable year-to-year consistency. Coming from a young poultryman just getting underway on his modest farm near Charlottetown, P.E.I., this is spectacular.

The statistics reveal just how creditable it was, too. In the 1959 tests, Raynor's birds netted a revenue of \$2.06 per chick started—a full \$1.06 better than the last-place entry. No wonder he is sure that the birds he sells through his hatchery are the kind that can make farmers money.

Raynor's entries consist of his specially planned Rhode Island Red x Leghorn crossbred. In developing it, he had the assistance of trained geneticists on the staff of the Canada Department of Agriculture. That's a service made available to any Canadian breeder.

Raynor now is intensifying his home-testing program to locate still better birds. He and his two boys built a 2-storey henhouse in the summer of 1958 themselves. The bottom floor is divided into 12 pens handling 60 birds each. Each of these groups represents a trial cross he is making. The pens are subsidized by the P.E.I. Department of Agriculture, under a policy to assist its own breeders, but it is supervised by the Federal Department of Agriculture.

In these pens, the performance of every group is measured for:

- Mortality
- Eggs produced per hen housed
- Egg size
- Value of those eggs
- The income they return
- Cost of the feed eaten.

At the end of the test, government supervisors calculate the total value of the eggs produced, the cost of the feed, and net profit on each lot.

The results are giving Raynor something more to smile about these days too. It looks like he has now produced a better bird than any he has sent to Ottawa so far.

Raynor has accommodation for 3,500 hens in his regular breeder flock, and presently is offering two crosses for sale—one of the Leghorn type, and the other the R.I.R.-Leghorn cross that has done so well at Ottawa. The latter is particularly useful for his Maritimes customers.

Island flockowners remained loyal to the old dual-purpose bird longer than most poultrymen. Now that feed efficiency is becoming more important, they are turning quickly toward the Leghorn-type bird. His crossbred gives customers an in-between bird of excellent performance. People can get used to handling it before switching to pure Leghorn-type birds.—D.R.B. V

Alberta's Largest Hatchery

STEWART'S SPECIAL STRAIN CHICKS

• NICHOLAS BROAD-BREASTED TURKEY POULOTS, \$70 per 100.

• EGG AND MEAT STRAIN CHICKS.

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STEWART'S PROVEN STRAINS WILL MAKE YOU MORE MONEY

WRITE FOR 1960 ILLUSTRATED CATALOGUE AND PRICES

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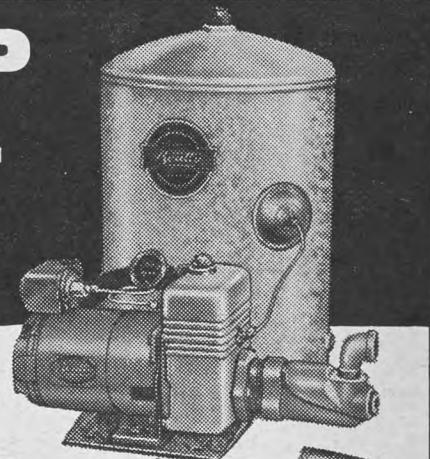
Arthritis Pain?

Pays to get best help like this lucky woman. This letter from Mrs. L.G., Toronto, gives good advice which may help you. She writes: "I injured my knee in a bad fall. Arthritis set in and pain was terrific, even worse at night. When I tried to sleep, the pain was like ice picks pushed in my knees and it swelled up like a balloon. Nothing helped me for 10 long weeks. Then I took a friend's advice and got DOLCIN tablets. I got a little relief the first day. In a few days I was feeling pretty good, getting a good night's rest, so kept right on with DOLCIN. When I hear of anyone suffering the pains of arthritis, rheumatism or sciatica, I can hardly wait to tell them about what DOLCIN did for me."

Letters from grateful users offer positive proof of the quick relief from the misery of arthritis, rheumatism, sciatica, lumbago, bursitis or muscular pains. Ask your druggist for DOLCIN Tablets today. 59-3

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This pump, as shown, comes complete, ready to install.

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The silicon bronze impeller is precision machined and perfectly balanced to guarantee quiet, vibrationless operation.

We also have the famous Beatty Direct Drive Shallow Well and Deep Well piston pumps, and a complete range of submergibles.

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What kind of a water supply system have you now?.....

..... Have you the electric power?.....

Gets bacteria counts less than 6,000 with Gillett's Lye!

Bill Hamilton of Carrickfergus, Ontario keeps a herd of 70 purebred Holsteins, and sells to the fluid milk market. Naturally, low bacteria counts are of prime concern to Mr. Hamilton. Using a cleanser and a solution of Gillett's Lye, here is how he is achieving remarkably low bacteria counts, averaging between 3,000 and 6,000.



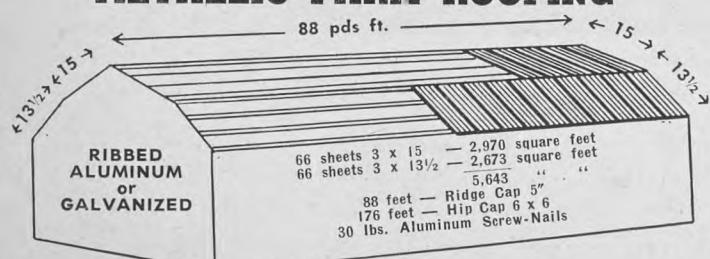
Preparing Solution. Mr. Hamilton prepares a solution of Gillett's Lye by dissolving two level tablespoons in a gallon of water. He uses this solution to clean and disinfect his milk pipeline. Lye causes no troublesome foam, and bacteria can't escape.



Rubber Inflations Stored In Solution until next milking. Lye solution kills bacteria on the surface and in the pores of rubber. It extracts fat in the pores, thus helps inflations keep shape and tension, resulting in longer life.



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POULTRY

Adapt Feed To Turkey's Age

HERE are three main periods in the life of a market turkey. If you want to make the most you can from raising them, be sure that feeding is suitable for each stage, says R. M. Blakely of the Swift Current Experimental Farm, Sask.

The brooding period is from hatching to 8 weeks, when each bird needs 7 to 8 lb. of turkey starter.

The growing period, 8 to 22 weeks, is the time for extra protein, minerals and vitamins, which are provided by a commercial growing concentrate or supplement. This is fed in conjunction with locally available grains. Ample concentrate is usually consumed during the first weeks of the growing period, but as the birds become older they eat more grain and less of the concentrate.

The finishing period, extending from 22 weeks to market time, is when the drop in consumption of concentrate can be a problem. At 24 weeks of age, market flocks will consume about 90 per cent grain and 10 per cent concentrate, which is enough to give them the extra protein required, as well as much of the mineral they need. But the quantity of concentrate is, in many cases, too small to provide all of the vitamin requirements, and particularly vitamin A. This vitamin is in succulent young green feed, which is seldom available at this season of the year. So it is recommended that they have extra green feed either in the form of alfalfa meal or good quality baled alfalfa.

Mr. Blakely points out that many otherwise well-fed flocks break down with respiratory infections during the fall months. In a large percentage of cases it is the result of a vitamin A deficiency. A healthy bird on a well-balanced diet is able to ward off minor infections which would affect undernourished turkeys seriously. ✓

Parasites Lower Egg Production

HOW much will lice and mites on laying hens cut egg production? At the Iowa Experiment Station they compared the records of 12 pens of 5 hens each that were infested with the chicken body louse, and the same number of hens that were free of lice. Egg records over a 14-week period showed an overall loss in egg production of 15 per cent because of the lice. Infested hens produced 26 per cent fewer eggs than non-infested hens during the last 10 weeks, and 84 per cent fewer in the final week. At the end of the period, there was an average of 25,000 lice per infested hen.

In areas where the northern fowl mite is dominant, the reduction in egg yields would be even more pronounced, because fowl mites cause more irritation and do considerably more damage than body lice.

The North Dakota Agricultural College recommends the following treatment for northern fowl mites: 2 tablespoons of 57 per cent emulsified

liquid Malathion, or 2½ ounces of 25 per cent wettable powder Malathion, in 1 gallon of water to spray on 100 to 150 birds. Malathion at 4 per cent strength may be dusted on the birds, or if the litter is dry, dusted on the litter at 1 lb. per 50 to 60 square feet of floor space. It is ineffective if the litter is damp. ✓

Help Them Digest Fiber

WHEN birds are turned out "to rustle for themselves," there's a danger of vitamin A deficiency, rickets and other vitamin deficiencies. Dr. C. H. Bigland, Alberta veterinary pathologist, says that at this age the veterinary laboratory finds some specimens sent there are dead as a result of plugging of the crop, gizzard or intestine with excessive amounts of fiber.

Dr. Bigland warns poultry owners not to forget that the chicken grinds up fiber in its gizzard with the aid of grit or stones. Stones are not always available, especially in northern parts of the province. For this reason, commercial grit or crushed gravel must be provided in sufficient quantity to enable the bird to digest the large amounts of fiber that are often available. Proper use of good green range would also eliminate many cases of vitamin A deficiency. ✓

More Eggs with Rationed Light

A MINNESOTA experiment over a 44-week period, using two otherwise identical flocks of 400 birds showed that light-rationed hens laid 72 eggs for every 63 produced by birds lighted in a conventional poultry house manner. Rationing the light induced the hens to lay 14 per cent more eggs.

For years, poultry men have made hens lay more eggs by extending normal daylight hours with artificial light. However, the experiment indicated that a planned restriction of light was more desirable, because it matured birds at a slower and more favorable rate, increasing egg output substantially.

The rationed birds had 6 hours of artificial light daily from 8 to 20 weeks of age. Then they were given an 18-minute increase each week for the test period. The conventionally lighted birds had 12 hours of light daily from 8 to 20 weeks, and 14 hours daily during the laying period.

Production, under the rationed schedule, reached its peak more slowly, but attained a higher level than that of the conventionally lighted birds. The conventional birds reached their peak within 5 weeks, with many birds laying small and less profitable "pullet" eggs, then sloped into a decline.

There were no significant differences in mortality, percentage of soft-shelled eggs or pounds of feed consumed per dozen eggs produced. Birds in both flocks were 22 weeks old at the outset of lay and were confined in windowless houses. ✓

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Every conceivable advantage to make all your grain and seed harvests faster, easier, and lower in cost is yours in new John Deere Hi-Lo Combines. You not only get the new advantages of the Hi-Lo design such as the high operator's platform . . . low, compact lines . . . concave and cylinder spacing from the operator's platform . . . fold-back unloading auger . . . and greater engine power—you get all the advanced features that have put each John Deere Combine at the top of its class wherever combineable crops are grown.

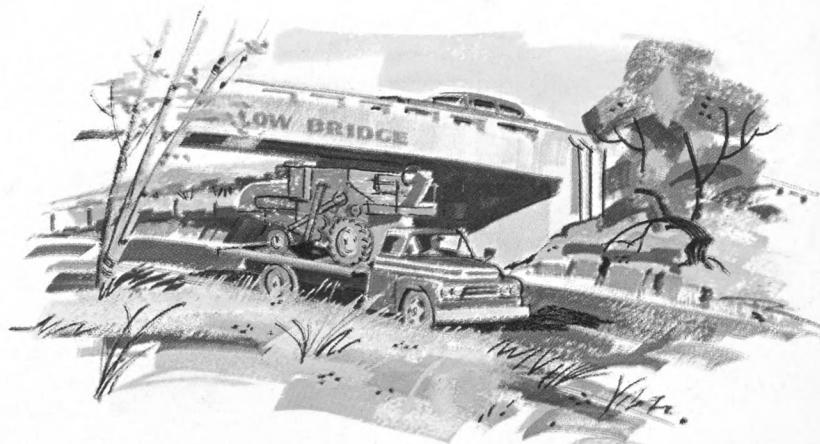
Many Advanced Features

Among the advanced features you get on Hi-Lo Combines are selective ground speed which enables you to adapt the forward speed of the combine to the condition of the crop—to keep the separator full at all times . . . double-ram hydraulically raised and lowered platform . . . positive auger and steel conveyor feeding . . . famous John Deere threshing units . . . extra-large, extra-efficient separating and cleaning units—to mention only a few of many advantages.

There's also a complete line of special equipment available for Hi-Lo Combines. There's a new reel-speed control and a reel lift both controlled from the platform. There's also a new 110-inch belt pickup. You can, of course, get a Hart ScourKleen . . . flax rolls . . . and straw-handling equipment to match your needs.

See Your John Deere Dealer

Get complete details on new John Deere Hi-Lo Combines at your John Deere dealer's. There's one to fit your exact needs—the 10- or 12-foot 45, the 12- or 14-foot 55, the big 16- or 18-foot 95 shown at left, and the brand-new 8-foot 40.





The brand-new John Deere **65** Combine...

New low lines . . . more capacity

... more value for your money

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The big-capacity 65 Pull-Type Combine has been the favorite of thousands of practical-minded grain and seed growers over the years. Now, with new low lines for easier storage and transport . . . with new, larger cleaning and separating units to increase capacity by 10 per cent . . . with new power in the engine-driven machine, and the new modern styling—the 65 Combine will more than ever fill the needs and desires of those farmers who put economy first.

The Low-Line 65 is completely modern. It has had the benefit of many refinements over the years. It's a finely "tuned" machine—well adapted to every grain, bean, and seed crop

you grow. It's easy to handle—all controls are within easy reach—all adjustments are made quickly and easily from the outside of the combine. It has an abundance of high-quality sealed bearings and rubber bushings to insure long life—quiet efficient operation.

You'll be happy with your investment for years to come

You get most of the good work- and grain-saving advantages in the Low-Line 65 as you would get in a large self-propelled, yet you pay less. And, the amount and quality of work turned out by the 65 will make you happy with your investment season after season.

Get complete details on owning the Low-Line 65 from your John Deere dealer before next harvest. He is looking forward to seeing you. Ask about his John Deere Credit Plan which makes it easy for you to own the money-saving—money-making 65 Combine or any of the four new Hi-Lo Self-Propelleds described in the preceding pages.

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Building an Irrigation Ditch

IRRIGATION ditches may be temporary or permanent structures.

Sometimes permanent ditches are used to carry water from the supply source to the fields and then temporary ditches distribute it over the fields.

- Both temporary and permanent ditches should have stable side slopes and banks that are strong to carry the water flow safely. Banks that are too steep may slough off when they're wet and require extra maintenance work. Those with top widths less than 2 feet are easily damaged.

- Temporary ditches can be built with steeper slopes and narrower tops than permanent ditches because they're generally plowed in and rebuilt each year. But permanent ditches should be made with banks that extend at least 1 foot above maximum ditch water level to prevent overtopping.

- All field head ditches should be constructed so a head of water can be built up at least 6 inches above the field at the point of take-out. If you use the border irrigation method, you will need a heavy stream of water, and should build your ditches so you can maintain the water surface more than 6 inches above field level.

- Ditches should be designed so they'll carry their required flows without erosion. It is best to lay them out on relatively flat grades, with a fall of not more than 1 or 2 inches per 100 feet.

- If you have to use slopes that will run the water too fast, you'll need some sort of erosion control structure. A common type is the "drop" where the water flows from one section to another over a series of vertical drops like stair steps. To prevent washing, stilling basins are built at the foot of each drop.

- Where slopes are so steep that drops would have to be too close together, lined ditches, chutes or buried pipes are used. Still basins are specially important here to check the water before it enters another section of earth ditch.

- If your ditches must cross roads



or waterways, you'll need some form of crossing structure. Bridges, culverts or inverted siphons are generally used in the case of roadways. Siphons are also handy for carrying water under natural waterways. Because they operate under pressure, siphons must be carefully designed and have adequate inlet and outlet structures to prevent excessive head losses. For carrying water over natural waterways or low spots on the farm, metal or wood or concrete flumes are used.

- Ditches built in porous soils such as gravelly or sandy areas, may suffer heavy seepage losses. These can be reduced by installing some type of water-tight ditch lining or by the use of pipes or flumes.

THE most common lining material used is concrete. It can be made in a continuous operation by employing a wood or metal slip form pulled by a tractor, or may be hand plastered if such forms aren't available. The lining should be at least 1½ inches thick.

Another material becoming more and more popular for seepage control is asphalt. Asphalt, butyl rubber or plastic membranes make good ditch sealers but they're more easily damaged than concrete.

A good low-cost seal can often be provided by lining your ditch with clay to a depth of 4 to 6 inches. Because they're easily damaged by ditch cleaning operations, clay linings should be covered with several inches of sand or gravel.

- When you build an open ditch irrigation system you'll need control structures to help you manage your water more efficiently. These will include division boxes where you need to divide your water between two or more ditches, turnouts to control flows into laterals and ditch checks for retarding or stopping the flow entirely.

Treated lumber can be used for these structures, but concrete is better and cheaper in the long run. In your smaller ditches, you can use portable checks, such as canvas or plastic dams or metal sheets.

- A must for proper water management is that you be able to measure the flow to each individual field. This is done by installing weirs, Parshall flumes or other measuring devices. If you deliver all your supply to one field at a time, you may need only one measuring installation, otherwise you'll need several. Weirs can often be built into such control structures as drops, checks and turnouts. Ditches that are too flat for weirs will need a separate device such as a Parshall flume.

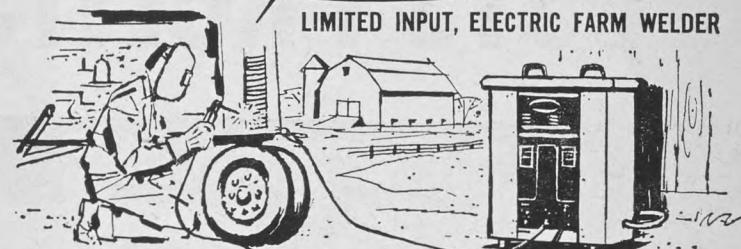
- In some cases water will have to be controlled right into the furrows. Plastic, rubber or metal siphons that lay over the ditch bank are vital for ditches constructed in unstable soils. These come in a wide variety of sizes. With more stable soils you can use spiles or furrow tubes through the ditch bank. Concrete, metal pipe or wooden boxes with simple slide gates are used to control flow out of the field head ditch. Gated metal pipe and gated flexible pipe made of canvas or plastic are good for controlling water flow into individual furrows.

All these devices which enable you to turn the water gently onto your land will help you do a better job of irrigation.—C.V.F.

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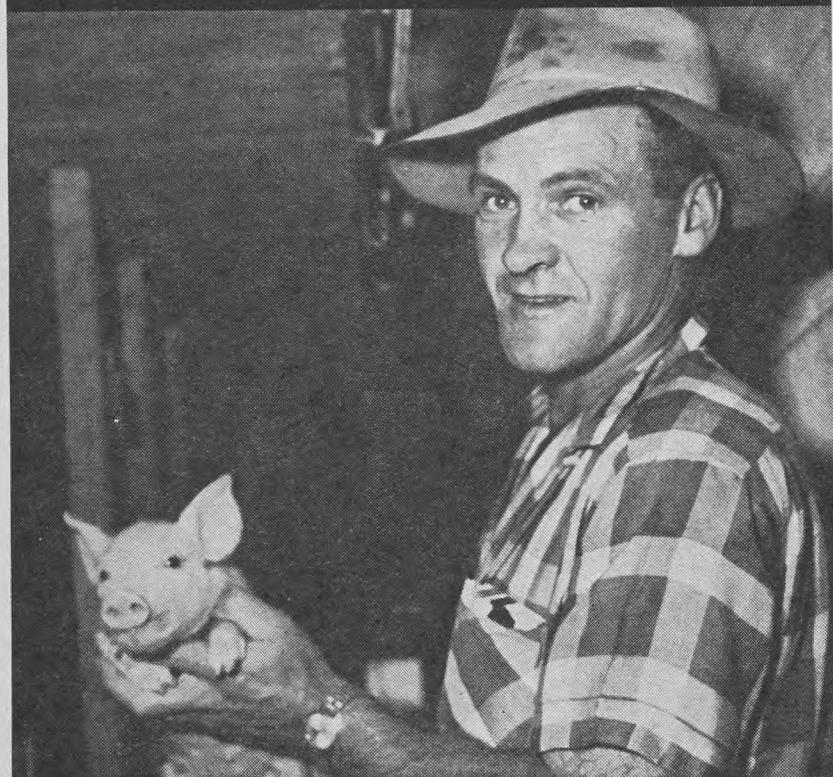
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TOWN

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"We now take more hogs per litter to market" says Len Underwood, Manager of Namao Hog Farms in Edmonton



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Iron Dextran Complex

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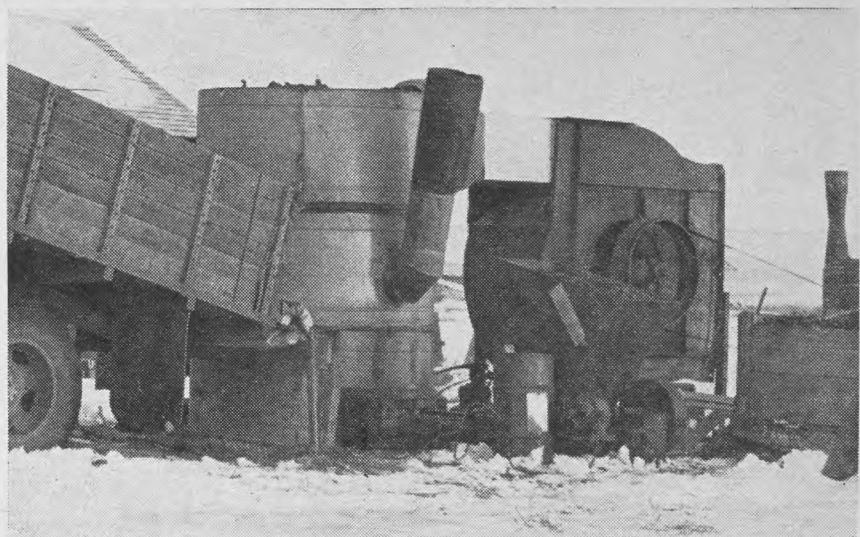
BENGER

BENGER LABORATORIES LIMITED

20 Spadina Road, Toronto, Ontario



Ingenious use of a mixed bag of materials



Tom Kempling's homemade dryer cost him \$300. The components (r. to l.) include a tractor, fan, stoker, furnace, canvas connection and a truck box.

I Made a Grain Dryer

by TOM KEMPLING

I BUILT my own grain dryer last fall at a cost of \$300. Since then, I've used it to dry 6,000 bushels of wheat, which varied in moisture content from 16 to 25 per cent. The results were very satisfactory. Samples of the dried grain were tested, showing no reduction in milling quality, and only a 2 per cent reduction in germination.

As can be seen in the picture, the outfit consists of a tractor, fan, stoker, furnace, canvas connection, and truck box with a false bottom of screen.

The fan blows air into the top of the furnace casing. After it is heated to 110°F., the warm air leaves the furnace near the bottom and flows through the canvas connection into the 6-inch space between the truck floor and the screen. Then the warm air flows upward through the screen and the grain.

The dryer costs me from 1¢ to 2¢ per bushel to operate. I use stoker coal in the furnace, and a diesel tractor drives the fan.

which might cause seed to be placed too deep or too shallow.

Seed runs were calibrated to ensure uniform seeding for each run.

Grain feed spouts were adjusted and aligned regularly to place seed in the bottom of the furrow. This was checked at intervals during seeding.

A subsurface packer was used to firm the soil and bring it into close contact with the seed.

Save Money Through Tractor Care

THESE ideas for keeping tractor costs down come from the Ontario Department of Agriculture:

Fuel costs are the biggest single operating expense. You can get more from your fuel through periodic tune-ups, in which you or your dealer go over the spark plugs, ignition points, carburetor and valves.

If you don't have to use the choke when starting the tractor in cold weather until the engine is warmed up, it probably means that your carburetor is wasting fuel.

You can have over-rich fuel if your air cleaner is dirty.

Tires inflated properly will cut rolling resistance. If they are too soft it's like driving a tractor uphill, and may also cause the sidewalls to buckle and breakdown the cord.

Use wheel weights for heavy drawbar loads to prevent slippage.

Don't overload the tractor. If your tractor lugs down under a heavy load, use a lower gear or reduce the load.

Some hydraulic systems, clutch fan belts and front wheel bearings need adjustment or lubrication only once or twice a year, but don't forget them.

Saw Safety

HAL WRIGHT, the Ontario Department of Agriculture's safety expert, advises you to choose the right blade for the material when you use an electric saw. Use only sharp blades and don't force the saw. If the motor stalls, pull back the saw before starting it again.

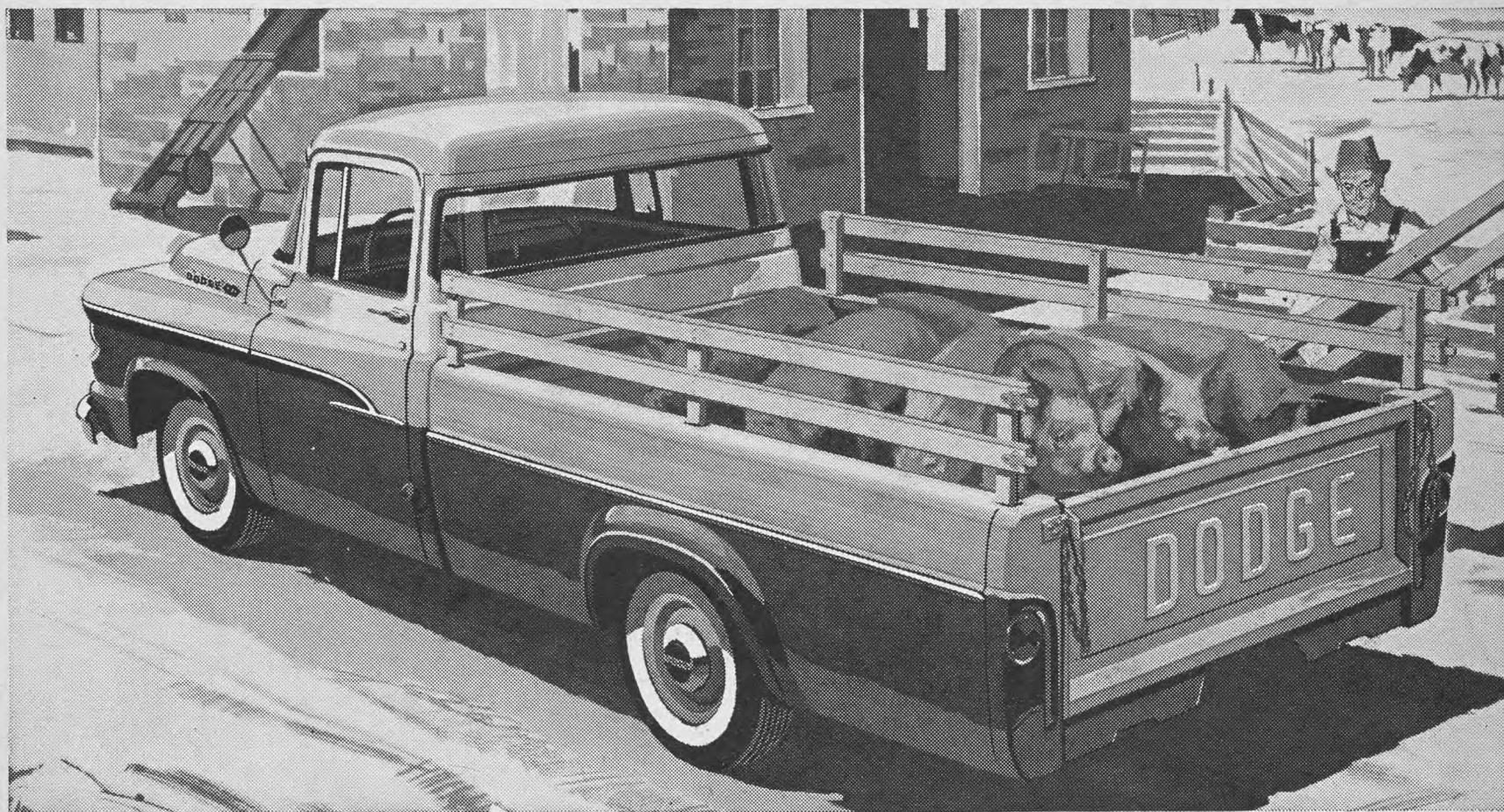
Press Drill And Disker Compared

THERE are no great differences in yield due to different recommended methods of seeding, provided that a number of precautions are taken during the summerfallow period and at time of seeding. This is the conclusion reached after comparisons between the press drill and the disk with seeder attachment at the Swift Current Experimental Farm, Sask.

A. Wenhardt reports that from 1956 to 1959 they seeded wheat with a press drill at 1 1/4 bushels per acre and had an average yield of 23.2 bushels. Using a disk with seeder attachment and packer at 1 1/4 bushels, the yield was 24.3 bushels.

Tillage during summerfallow left surface soil level and firm. It was completely free of ridges and hollows

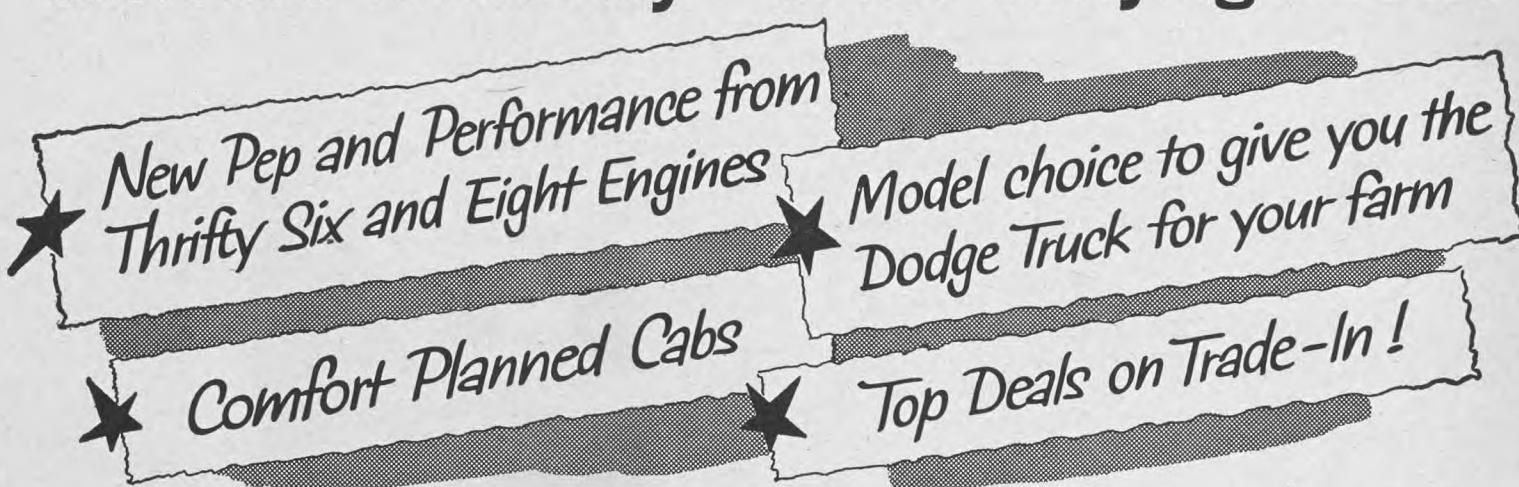
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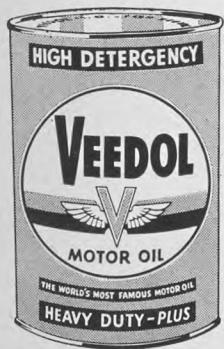
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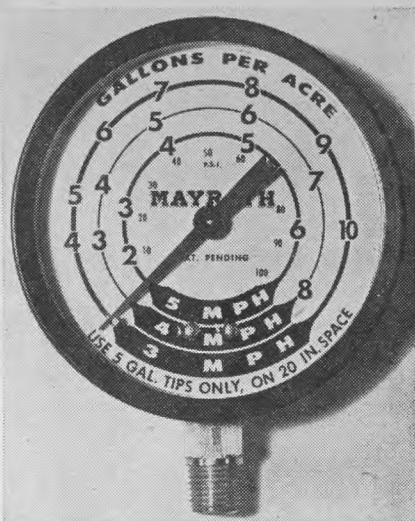


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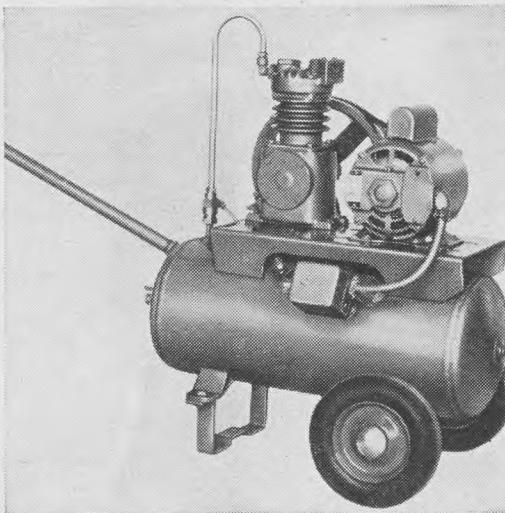


Sprayer Gauge

This gauge, reading in gallons per acre, is designed to mount on crop sprayers, usually directly behind the driver. It can be used either with 5-gallon or 8-gallon tips spaced 20 in. apart. It gives gallons per acre of insecticide or herbicide at speeds of 3, 4 and 5 m.p.h., and also shows the pressure. (Mayrath Inc.) (286) ✓

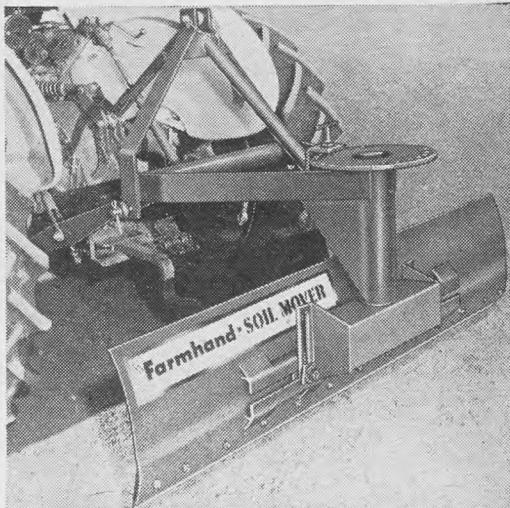


Air Compressors



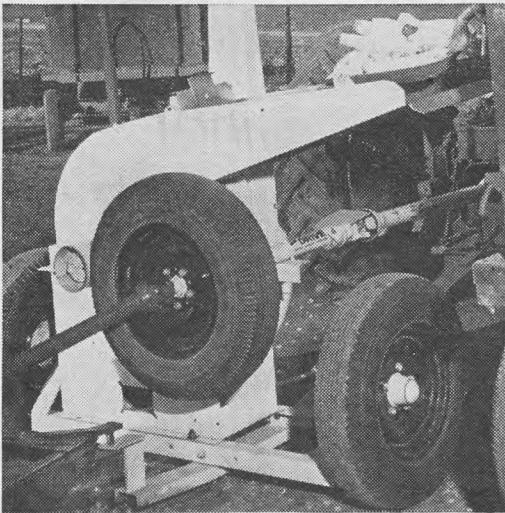
Specially adapted for farm use, this line of air compressors has a light-weight air pump with aluminum alloy rods and pistons, and a totally enclosed crankcase to exclude dust and moisture. There are single and twin cylinder models, with electric motors of $\frac{3}{4}$, 1, $1\frac{1}{2}$ and 2 h.p., 110 or 220 volts. Gasoline engines of the same horsepower are also available. Tires and handle can be added. (Champion Pneumatic Machinery Co.) (287) ✓

Two-Way Rear Blade



Here is a rear blade for tractors. The 6-ft. blade can be used forward or reversed, and extended as much as $10\frac{1}{2}$ in. on either side. There are 7 different angle settings, 15 degrees apart, and the blade can be tilted 17 degrees up or down. The moldboard is $\frac{1}{4}$ -in. steel plate, 6 ft. long and 15 in. high. The replaceable cutting edge is $\frac{3}{8}$ in. by 6 in. by 72 in., curved and beveled heat-treated steel. The total weight is 330 lb. (The Farmhand Co.) (288) ✓

Air Drive System



The Air Drive eliminates belts, gears and chains. Mounted on the tractor PTO shaft, it can drive hammermills, shellers, irrigation pumps, fans, emergency generators, etc. The system has a standard $1\frac{3}{8}$ -in. PTO size and also fits most 5-hole wheels. Any recappable tire can use power from a 3-to-4-bottom plow tractor without slippage. There is a splined shaft at both ends to operate a feed mixer at the same time as the hammermill. (Hawk Bilt Mfg. Corp.) (289) ✓

For further information about any item mentioned in "What's New," write to WHAT'S NEW Department, The Country Guide, 1760 Ellice Ave., Winnipeg 12, Man., giving the key number shown at the end of each item, as-(17).

Continued from page 13

FARM PROFITS BEGIN ON PAPER

How? This will be different for every farm. But the same principles will apply each time.

TAKE one case. A man had an excellent beef cow herd on his 200-acre farm. His fields grew bumper crops. The enterprise looked prosperous at first glance. But the profit picture was disappointing.

Hunt's calculations showed that this farmer wasn't turning out enough beef per man. He knew of other owners of beef cow herds on high-priced land, both in Canada and in the United States, who were having the same trouble. The tremendous burden of feeding a cow for an entire year and a calf as well, before having a calf to sell or put into the feedlot, was too much.

His recommendations: "Gradually switch over from a cow-calf program to feeder cattle. Let people on cheap land raise the feeder cattle. You buy them, and you'll be able to produce more pounds of beef per acre."

Hunt carried his recommendations one step further. He calculated the dollars and cents returns that could be expected from each of various cropping and feeding programs. Corn silage could yield a cash profit of \$110 per acre, he found, compared to \$60 per acre for grain corn, and \$50 for a hay and grain program. He recommended a corn silage program for the farm.

ANOTHER farm presented a different problem. It had a net worth of \$50,000. The farmer owned everything, hadn't borrowed to expand his program. Again, income wasn't high enough.

"Some people use too much credit, some too little," says Hunt. "Here was a man in a strong position to borrow from the bank to expand his enterprise to a profitable size. I advised him to do it."

On the Lowrie farm, which had grown quickly in recent years as the young owner bought more land, expanded his acreage of corn and cash crops, and increased his steer and hog feeding enterprise, Hunt recommended several important changes.

- Expand the sow herd to 90, but split it into two groups, housed on separate farms. Remodel farrowing houses to handle them efficiently.

- Remodel another set of buildings so 1,000 feeder pigs can be handled with little labor.

- Revise the corn program to include a picker-sheller, dryer and grain bins (to replace corn cribs).

- Subscribe to a soil service which gives more precise soil tests. This provides bigger crops with less fertilizer.

And as with most of his customers, even after the first exhaustive study of the farm was made, Hunt keeps in close touch with Lowrie, from month to month, to help carry the program along, and revise it if necessary to meet changing conditions.

"On the Lowrie farm," says Hunt, "the farm program was sound to start

with. We have just been tying down the loose ends."

Before going too far with the farm plans, Hunt likes to make sure the farm has a sound legal base.

"Partnerships, for instance, can be troublesome. Some day, death or disagreement will break them up. Better straighten them out early," he advises farmers, "when there is lots of time."

Such a move calls for specialized advice. Hunt will arrange a meeting of the farm partners with an expert

in this field, rather than trying to do the job himself.

"The best advice is usually the cheapest in the end," he says of this. He finds the best man he can to plug any legal loopholes in the farm business, so none of his clients will ever find that a lifetime's work has been lost when they have just about reached their goal.

WHO uses Hunt's services?

Strangely, he says, it often seems to be the fellow who needs it least who comes to him for help. Farmers who are doing well, but who want to go ahead a bit faster, have signed up with him. Sometimes, farmers who are bewildered by the swiftly moving tide of events in farming, have come

(Please turn to page 63)

MEN PAST 40

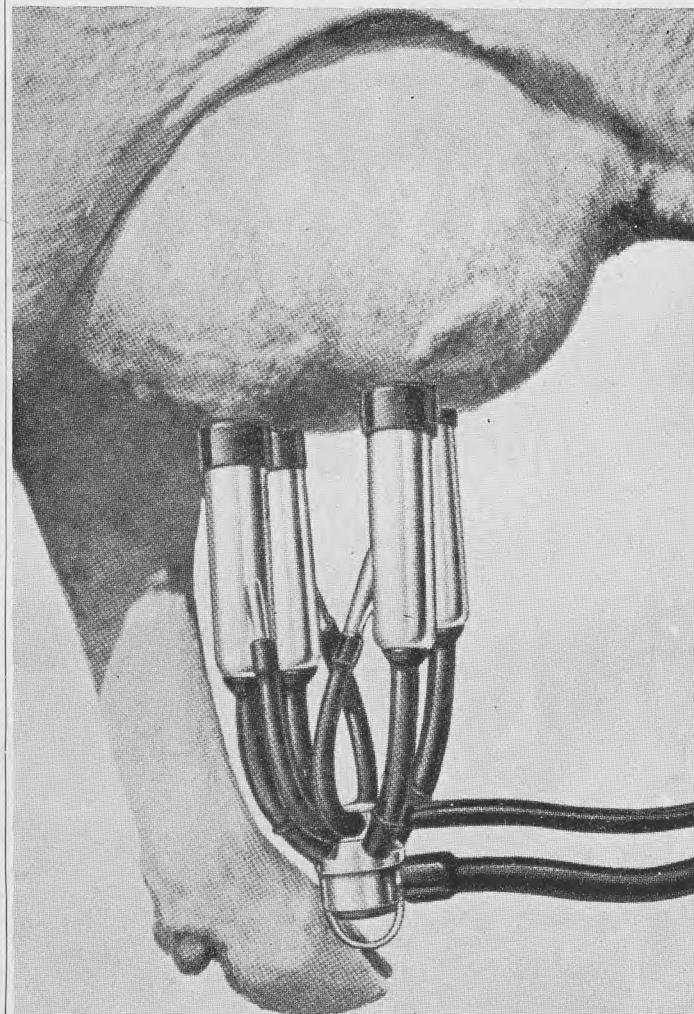
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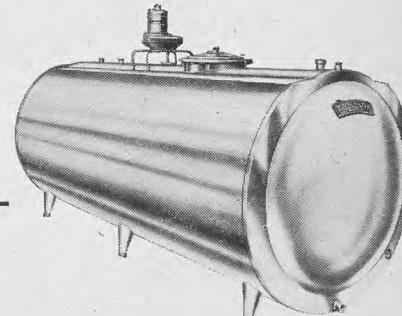
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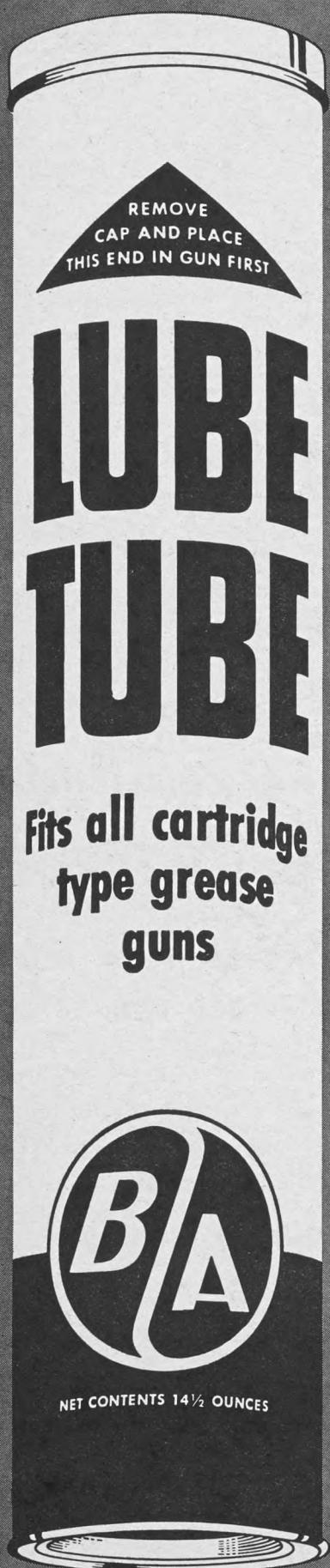
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(Continued from page 61)

for help. Absentee owners call on him for help—sometimes to be advised by him to sell their farms, rather than risk losing more money.

Lowrie explains his reasoning this way: "No one can stay at home and farm today, and still keep abreast of current changes in farming. Hunt is devoting his full time to keeping informed. He has specialized training to assess changes. He brings perspective to our planning that is invaluable."

Dairyman Dane Learn, who along with his brother Buford, at Ingersoll, also relies on Hunt, is one of his community's most vigorous leaders. But he says simply: "Farming is too com-

plex for most of us to keep well informed on today. George knows key people in colleges and farms across the country. He can get information on new developments quickly, save us making wrong decisions. Buford and I like to call on George's judgment."

Hunt himself says he is not doing any more than what a farmer would probably be doing himself if he wasn't tied down milking cows or feeding pigs.

Don Lowrie insists the service is more than just that. He puts it this way: "George's background enables him to bring a depth of judgment to farm planning that I can't match myself." V

Continued from page 14

IRRIGATED PASTURES

When the results of the 1958 tests were tallied they were spectacular. They showed that the little field of irrigated (and fertilized) pasture had produced a cash return of \$69 per acre! Because this seemed too good to be true, Bill Herringen tried the test again in 1959. This time, the net profit per acre was \$111, and 1959 was a poor year for growing anything! So it

put the program to a very severe test. Here's a breakdown of the 1959 income and expenses for the 50 steers. They were fed from May 26 to September 18 (114 days) from the production of 17½ acres. The steers were bought at \$22.50 per hundred and sold for \$23.50 per hundred. A loss of 1 per cent is assumed although no losses actually occurred.

Income:

Sale of 49.5 head weighing 848.4 lb. at \$23.50 \$9,869.00

Expenses:

50 head purchased weighing 524.4 lb. at \$22.50	\$5,899.00
Cash costs of tractor (fuel and repairs)	229.00
Forage chopper repairs (2% replacement cost)	22.00
Feed wagon repairs (2% replacement cost)	28.00
Repair costs on other machines	2.00
Depreciation cost on tractor	98.00
Depreciation cost on forage chopper	82.00
Depreciation cost on feed wagon	7.00
Depreciation cost on other machinery	1.00
Depreciation cost on corral, etc.	50.00
Interest on capital in machinery	101.00
Interest on capital in livestock	92.00
Interest on capital in real estate	70.00
Salt, mineral, aureomycin	60.00
Seed purchase (at \$1 acre/yr. plus one-third)	23.00
Vet services, sprays	50.00
Water rental	26.00
Taxes	24.00
Fertilizer cost (\$18 per acre)	306.00
Labor cost (at \$1 per hr.)	415.00
Cost of implants	41.00
Cost of bedding straw	50.00
Cost of hay (4 ton)	80.00
Cost of trucking	100.00
Total Costs	\$7,919.00
Net profit	\$1,950.00
Net profit per irrigable acre	111.00
Net profit per head	39.00

(The value of the manure was estimated to be 50 tons at \$4=\$200)

"Last year had a poor growing season, and 1958 a good one," said Bill. "It's probably a good thing this happened. Now we have results from a good and bad season, which gives us a pretty fair idea what you can expect from this type of feeding."

Comparing the 2 years, the results stacked up this way:

	1958	1959	Average
No. of days on feed	128	114	—
No. of acres	17.0	17.5	—
No. of steers on feed	40	50	—
Gain per acre	666 lb.	926 lb.	796 lb.
Gain/head/day	2.21 lb.	2.87 lb.	2.53 lb.
Net profit per acre	\$69	\$111	\$90
Cost per lb. of gain	14¢	12¢	13¢
Net profit per head	\$29	\$39	\$34

(Please turn to page 64)

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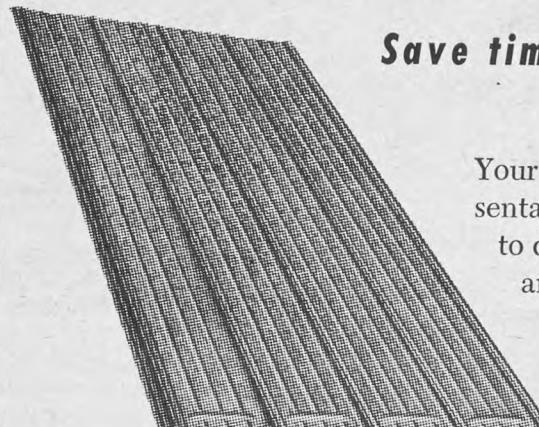
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"Steers coming off grass don't carry enough finish for slaughter, and these were no exception," Herringen admitted. "But they *did* make good short keep (70-90 days) feeders. Our plan this year is to feed a limited amount of grain, say 5 or 6 lb. per head per day."

"Whenever people talk of high net return crops under irrigation, they immediately think of sugar beets and canning crops," he went on. "But these results indicate that raising beef

via irrigation and mechanical grazing compares very favorably with these crops. In an Alberta Department of Agriculture survey on the net return per acre for various crops (2-year average), sugar beets were found to bring \$136, corn \$26 and peas \$14. Our 2-year average of \$90 is much higher than the returns from canning crops, and not too far behind that of sugar beets."

"One thing you must remember. In order to carry three head per acre on

irrigated pasture, your grass must have plenty of moisture at all times. Another is that water and fertilizer go hand in hand—one is no good without the other."

"I believe we're being far too conservative when we apply 100-200 lb. of fertilizer on irrigated pastures," Bill continued. "This is just an appetizer. Until we raise this to 400-500 lb. to the acre we're not doing our pastures justice. It's like expecting the hired man to do a full day's work on an empty stomach."

Farm Management Hints That Will Help

WANT to keep your farm program on the tracks during the 60's? Prof. A. C. Robertson, of the Ontario Agricultural College, says:

1. Quit paying inflation prices for land and buildings. Quit going to auction sales with bank money in your pocket; the auctioneer can spot this and sometimes bids against you.

2. Don't depend on what you hear at local auction sales and local meetings entirely. World-wide decisions are not made here, yet they may affect your business tomorrow.

3. Pay attention to your banker and farm management-finance man. If they know their business, they won't lead you up a blind alley.

4. There are lots of paying farms in Ontario. Find out where they are, ask your agricultural representative to make up a little party and visit these farms in an organized fashion.

5. For goodness sake pay attention to: *soil and crops* — through the years what a man grew has been important. There have been times when you could buy income from the tail gate of a truck but not at present except in exceptional circumstances. Baby the livestock a little. This does not mean overfeed. Just a bit of care and common sense, and they will respond. Make pets out of them.

6. Of course, you need balancing feeds and other purchased feeds.

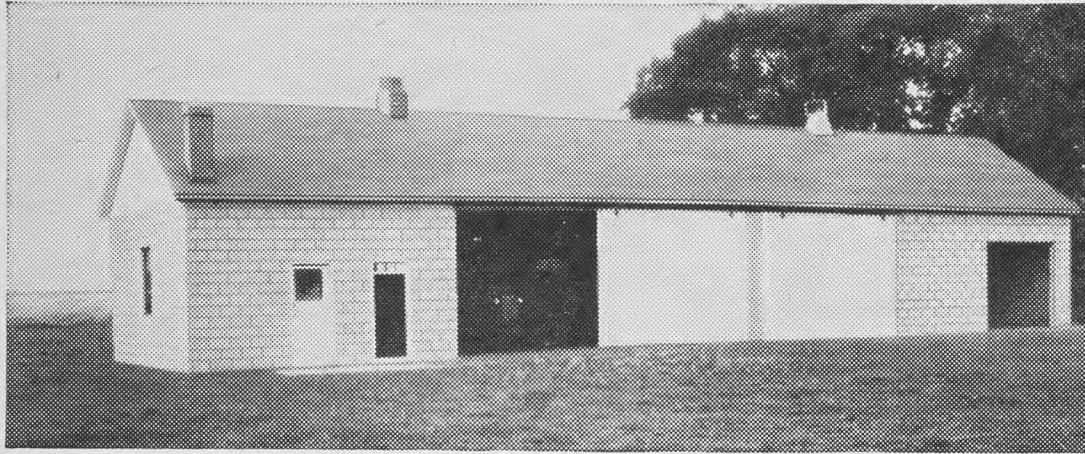
7. Draw a line down the middle of some page, probably a good many. Put assets and liabilities down. What's the surplus? Don't value that farm too highly. Then take a farm account book or make one up. Still only two columns are absolutely necessary — receipts and expenses. Start at the first of the year and put down each item. Add them all up at the year's end. Have you got \$3,000 to \$2,500 or \$2,000 for labor and interest on investment?

8. Get your banker to help you open a current account. Pay all bills by cheque. Of course, they will charge you, but it's cheap bookkeeping. Have a special savings or checking account for family living. Transfer (by cheque) money to the savings account for purchased food, clothes, children's education, etc.—anything that is not the farm's business.

9. Consult your family, your banker, your agricultural representative, your farm management and farm finance advisor frequently. If you tell a straight story, if your farm has a chance of providing a good standard of living these people will help you a lot. After all, your family is close to you; your banker makes his money by wise and judicious loans; your agricultural representative is a civil servant educated to assist; and your farm management-farm finance advisor knows what makes a paying farm. V

Clue to Irrigation

SIZE up your farm's topography by noting the steepness and direction of slope, depressions, knolls, ridges and the soils associated with these conditions. This will give you a clue in selecting the best irrigation system for your particular farm. V



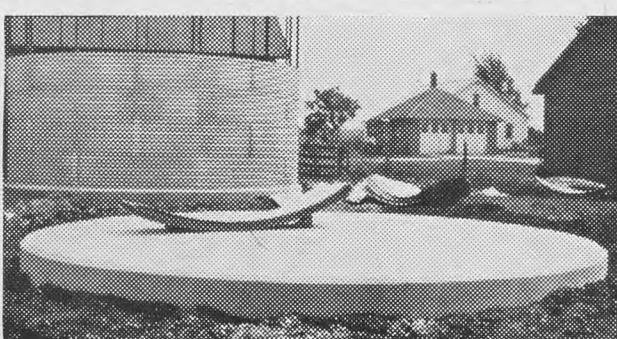
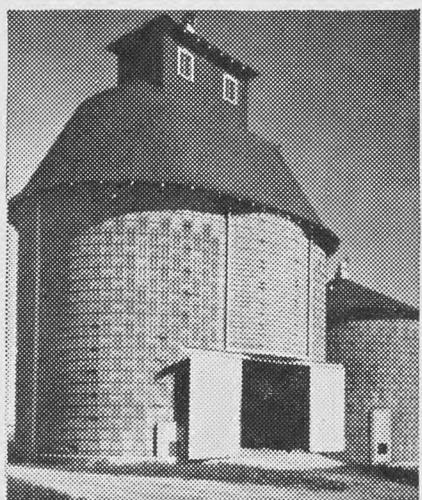
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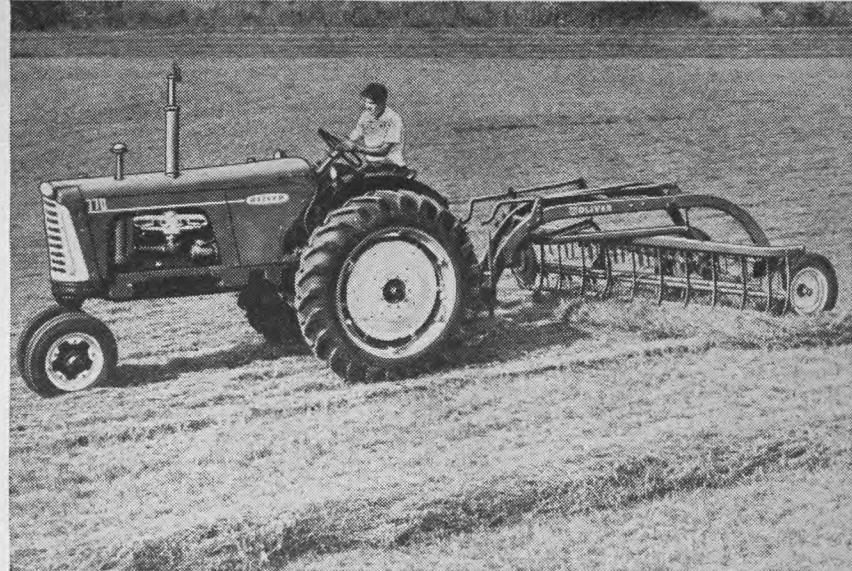
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- Leaf-tight construction, positive knotting

GET SET and GO—go for hay quality at modern tractor speeds. See your nearby Oliver dealer and get a trial of this 12-ton-per-hour forage system in your own field. See how you mow, condition, rake and bale a steady 12 tons with positive leaf-saving action... how you beat the weather hazards and get your crop in while quality is high. Notice how the gentle action of these four high-speed Olivers takes care of the high-protein leaves.

While you're talking with your Oliver dealer, why not ask for a **TEAMED-POWER** demonstration—a high-efficiency Oliver tractor matched with one of the four quality-saving hay tools. Then see how much more quality forage you'll bring in. Remember, too, early trade-ins for Oliver balers are eligible for a 6% bonus on your down payment until delivery time.

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The dollars and cents facts of hog raising demand that anemia control be thorough, simple and fast

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Iron deficiency anemia can — reduce the number of pigs weaned, reduce the weaning weights, increase the number of poor doers.

The pigs may look fine, but they grow slowly — increasing your feed bill.

Research has proven that a baby pig needs about 126 mg of iron during the first three weeks. If your pigs receive less they may be costing you money.

Only Benger's iron dextran supplies all the iron a pig needs, plus a reserve, in one treatment.

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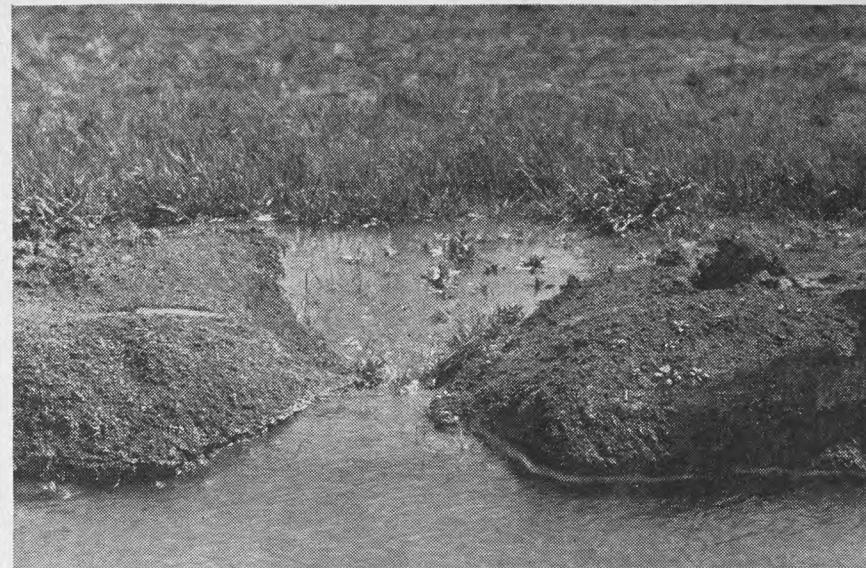
Benger Laboratories Limited

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BENGER

Continued from page 15

WHO WANTS WATER?



[Guide photo]

The side of a ditch is opened at Rush Lake to allow water to flow onto land by gravity. Supervision is needed to stop any water collecting in low spots.

repaid quickly by eliminating the need to buy hay or sell off cattle because of dried-up pastures.

In yet another type of water control project, what was once an almost unproductive alkali flat is producing as much as 4 tons of hay per acre. It is encouraging dryland farmers at Rush Lake, near Swift Current, to turn away from straight grain production and build up beef and dairy herds.

Bill Loewen, manager of the PFRA project, says there were just 300 acres cultivated on this bottom land 12 years ago. But, by 1959, they had 4,700 acres leased in forty 80-acre lots for hay production, serving about 200 farmers in surrounding districts. PFRA owns the land and keeps control over it through the leases, because it could be spoiled so easily by over-irrigation. Mishandling could bring the alkali back up to the surface and many years of hard work and heavy expense would be thrown away.

In 1958, the dry season would certainly have meant importing hay into the Rush Lake district. But irrigation helped farmers to produce forage valued at \$250,000. Again in 1959,

the district was badly parched in June, but the irrigated land was lush and green. Canals bring water to them, and all that farmers need to do is open up earth dikes and flood the plots. The amount of water is controlled by the number of openings made in the dikes, and it is distributed by small field ditches.

A condition of the lease is that a farmer keeps the irrigation under constant supervision to prevent ponds forming and ruining the land. It costs him \$3.70 per acre for rental and water supply, which he pays on a crop share basis. He is also responsible for reseeding.

Typical of these farmers is Peter Sather, who has a dryland farm nearby. This additional hay supply enables him to keep about 60 beef cattle, from which he is building a herd of polled Herefords. With a first cut of 2½ tons per acre, and a second of 1½ tons, he has been able to feed hay at a rate of 2 tons per head.

IN the adjacent areas, there are many farms where this gravity-type irrigation is impossible. But last year Henry Redekop was pumping



"Your date is here with his jalopy. I can hear them both knocking."

water by tractor power from the Herbert reservoir to irrigate feed grains with a sprinkler system. The PFRA rate was only 40¢ per acre, but he had to invest \$3,800 in aluminum pipe and sprinkler heads. If in dry years this can make the difference between a 12-bushel and a 40-bushel crop, Henry feels that it is worth it. He feeds oats and barley to his hogs.

Another system used at Rush Lake is once-a-year flooding, which is especially suitable for high alkali soils. PFRA dug a deep drainage canal, from which water is run into field ditches in the spring. Because the land is flat, the water overflows onto the fields and then the surplus drains back into the canal. Linked with this is a system of tile drains, 8 feet down, with automatic pumps to direct water into the canal.

ALTHOUGH forage is the most common crop for irrigation in Saskatchewan, there is a different development in the Qu'Appelle Valley. The basic idea is to control spring flood waters, which otherwise would run to waste, for use later in the year when growing crops need it most. Other considerations were Regina's water supply from Buffalo Pound Lake, and the obvious attractions of the valley as a resort area.

The Buffalo Pound Reservoir is the key point in water control, but there are many small control structures in the valley itself. One is located on the Qu'Appelle River near Craven and helps to maintain water levels for irrigation from Last Mountain Lake, which is also a favorite resort area.



It provides regulation, too, for flood irrigation and stock watering.

In another part of the valley, alongside Wascana Creek, a farmer is irrigating 300 acres of field peas and seed potatoes. He has dammed the creek with rock and earth and is pumping up a steep bank to a sprinkler system. His investment in pipes and sprinklers is high at \$7,000, but with high-value cash crops it should pay him.

These are just a few of the things that are being done through water control and irrigation in Saskatchewan. It happened that The Guide visited a number of projects during an exceptionally dry season, when the advantages of water conservation were obvious. But even when there is no drought, these projects are needed to meet increasing demands on water supplies made by progressive farming and modern living.

Continued from page 16

TURKEYS AND MUSHROOMS

about mushroom culture, and spent most of his spare time during the winter of 1953 reading all the literature he could get on the subject. The involved discussions about pH and how to control it were a bit difficult to comprehend. But he began with an experimental 800 square feet in the barn and in an old granary, and during the summer of 1957 harvested 800 lb. In the summer of 1959, encouraged with this yield, he prepared the brooder house for mushrooms as soon as the poult were out and set down 8,000 square feet.

It may seem to those of us who have picked mushrooms on an old manure pile that there would be nothing much to growing them. But they are far more touchy a proposition than turkeys.

Mushrooms are grown on well-rotted horse manure in deep trays or flats built in tiers 18 to 20 inches apart. In this country, the flats must be inside a well-insulated building with air-conditioning equipment to maintain an even temperature.

The preparation of the manure itself is an exacting business. It must have exactly the right proportion of straw, and the rotting must be carefully controlled. The entire process takes 4½ weeks from the time the manure is collected until it is placed in the growing flats. Then there is a further 7 days of carefully controlled high-temperature curing in the mush-

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room house before the spawn can be added.

The 8,000 square feet of flats require 90 tons of manure. Frank has so far been able to obtain the manure from local farmers.

The mushrooms begin to appear 3 weeks after the spawn has been added. A good yield will average 2 pounds per square foot, and the sight of a mushroom bed in full production is a heartening thing.

WHAT are the problems besetting the mushroom grower, if getting them started at all isn't problem enough? One of the worst hazards is insect damage. The growing houses must be absolutely fly-proof. Another headache is the perishability of the

mushrooms themselves. Once they are picked they *must* be shipped and processed immediately.

Another problem is moisture control during growing. Too much will cause the mushrooms to shoot up on long thick stems like woodland toadstools; too little will stop growth altogether.

The byword here, as well as with turkeys, is eternal vigilance, and in this respect the Kowals' experience with turkeys was good training. Here also, as well as with turkeys, there were the setbacks which can be written off as costly lessons. The result of these "lessons" is that Frank works very closely with the soil specialists in Winnipeg in order to keep the guesswork down to a minimum. Previous

attempts at guesswork have convinced Frank not to let *anything* near his mushrooms until it's been thoroughly analyzed!

Speaking of analysis, the food value of mushrooms is high. They consist of water, 88.1 per cent; protein, 3.5 per cent; fat, .4 per cent; carbohydrate, 6.8 per cent, and ash, 1.2 per cent. As well, there are vitamins B (thiamin), B₂ (riboflavin), C, and K.

In spite of total mechanization of such operations as feed mixing and distribution, and manure preparation, the labor costs involved in this turkey-mushroom enterprise are heavy. Frank employs five local men permanently.

About the one big problem which faces everyone, markets, Frank is quite confident. He feels that the drop in the support price for turkeys will tend to discourage the incidental producer such as the farm housewife who markets several dozen birds each fall, but that the full-time producer will get by. In any case, if there is a real drop in turkey prices, the mushroom market seems to be a very secure one indeed.

At present, the Kowals can expect to average 45¢ to 50¢ a pound for all the mushrooms they can produce. And now, with 16,000 square feet of producing space available in the two big brooder houses, giving them a yearly potential production of 47,000 pounds, their confidence in mushrooms appears to be fully justified.

Plans for the future? Frank talks of expansion, especially in mushrooms. But for the time being, his wife, Luella, has her eye on the new ranch-style house Frank is putting up just south of the old buildings. And, unless everyone takes a sudden dislike to mushroom soup and to Thanksgiving turkey, it will soon be finished. v

Continued from page 18

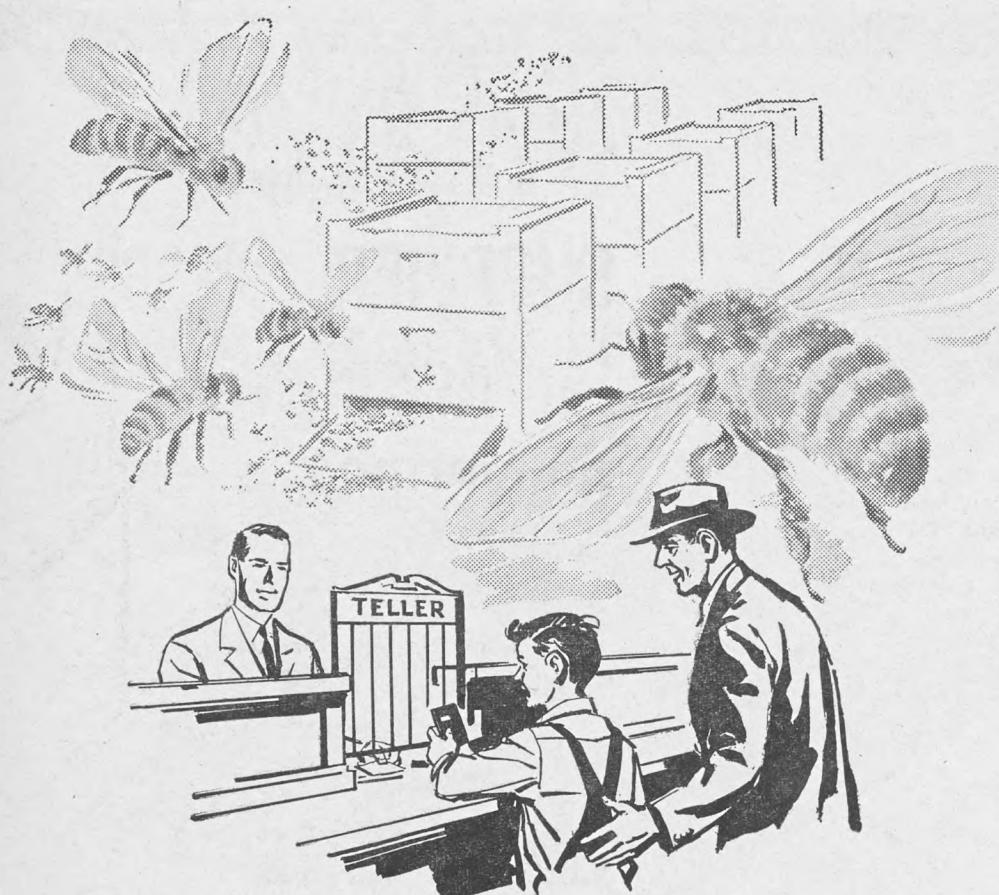
HOW THEY STUDY AT ALNARP

Alnarp was deserted when we arrived. The Saturday closing affects not only shopkeepers but everyone in Scandinavia, and only the most essential work gets done. We were very lucky to locate a hospitable English-speaking teacher.

Our host turned out to be Mr. Oland, who teaches economics and keeps the estate records. Alnarp Estate sells dairy products, receives cash for the spinach and green peas produced for canneries, and for other products. All funds are turned over to the state, and Alnarp presents its annual budget for the state grant like other schools.

Mr. Oland said some startling things about Swedish agriculture, as we toured the barns and fields. For instance, tractors have multiplied from 10,000 in 1939 to 160,000 in 1959.

"We test machinery here for manufacturers. They don't have to get backing from us, of course, but it's hard to sell a machine in Sweden without it. This means a great saving for the farmers, since the manufacturer must produce something that stands up to



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This Swedish combine is operated by an Alnarp student in a field of oats. The school tests farm machinery for manufacturers and reports the results.

use. Our reports are completely unprejudiced."

I was impressed by a sugarbeet harvester that digs, trims, and gathers the beets.

"It really is not economically sound for Sweden to grow sugarbeets," Mr. Oland said. "Raw sugar is cheaper. In fact, that applies to Swedish farming all over. We could import everything more cheaply than growing it ourselves. But you never know when a war might come. Our economy must be able to produce and handle its own food resources."

He showed us the barns, including the grain operation. Harvest was on in the fields, and now the loads of grain were coming in. We watched the loads dumped over a grid, the grain cleaned and stored just as on a larger scale in our elevators. For feeding operations, chutes carried grain down to a mixer in exact proportion, as on Canadian feedlots.

Mr. Oland dug out some statistics. "Here is our production average over a 10-year period. Skane Province has a reputation for growing heavy stands of grain."

It was pretty confusing to me—4,234 kilos of barley per hectare translates into about 6 tons per acre. (You can figure out the bushels for yourself.) And 4,422 kilos of winter wheat per 2.4 acres is well above the national average, and very far above the Canadian average. I noticed that the cutting blade was set high, leaving long straw to be turned into the soil. Mr. Oland assured me that straw disposal was a problem in Sweden, too.

When we made a repeat visit to Alnarp, he hunted up a senior student, Bernt Joelsson, to introduce us to the

Holstein-Friesians. Sugarbeet tops are used as fodder for the cattle, fresh to around December, then from pit silos covered with straw to prevent freezing. The big fleshy leaves of rape and lucerne are treated similarly.

"But the best food you can give a cow," said Bernt, "is this pea-vine discarded after the peas have been harvested. The estate grows the peas for a factory, but they do the harvesting and leave the vines. So they are a cheap feed, and make far better ensilage than lucerne does."

Students like Bernt Joelsson and Bror Linden study in their individual rooms in the midst of serious research. They are aware of experiments at the Dairy Research Station, where milk from Alnarp and nearby farms is processed for distribution, and made into butter and seven kinds of cheese.

Milk is bottled in both brown and clear bottles, though they've proved it keeps better in the brown bottle. All are topped with aluminum foil of different colors for each kind of milk.

Students can likewise note progress made at the Horticultural Research Station. For instance, they now produce dozens of shades of cyclamen, far more than florists now bother with, and these are a favorite cut flower.

Mr. Malm, one of the teachers, conducted us to the hothouses where we saw rows of chrysanthemums ready for shrouding in long black cotton sheets.

"They think it's autumn," said Mr. Malm smiling. "We draw the curtains over the plants from 5 p.m. to 7 a.m. to give the impression of longer hours of darkness. This stimulates the hormones that produce the bloom, so we can regulate the blooming period to almost any time. We followed the lead of a research station in California."

Florists contend that chrysanthemums are fall flowers, but the public showed quick acceptance of these long-lasting blooms even in summer.

STUDENTS in the Farm Management Course do no practical work in their school year. They concentrate on lectures, study and demonstration. Bror Linden and Bernt Joelsson had recently toured through Holland with their groups, and were appalled to discover the high cost of creating dike-land.

These are serious students, and our appointment with Bror had to be



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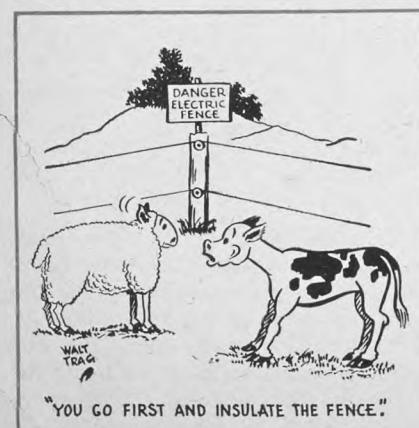
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sandwiched between classes. We sat in his small study high up in "the castle," as the old building is called. I wondered if Canada might yet lure him back?

He grinned. "Here in Sweden, a farm worker puts in an 8-hour day, and gets 3 weeks paid vacation, like all employees."

He reached for the single fat law book which contains all the laws of Sweden in clear, simple language, and which is nearly as common in farm homes as a mail-order catalog in ours. "You see, it says right here how long we work and for what wages, and how much notice an employee must be given before dismissal."

He replaced the fat "Lag" book, and went on. "The next edition will have a new law giving farm hands a 40-hour week. To handle week-end work, the farmer will have to do it himself, or hire an extra man, perhaps share him with another farmer."

Canada didn't offer its hired men that kind of deal, we admitted. But surely it gives him opportunity to own land more quickly than in Sweden?

"Yes, I could probably make more money in the end by becoming a Canadian farmer," Bror agreed seriously. "But your farmers work terribly hard. I don't want to work 20 hours a day for money, and I don't want to get rich at the expense of my workers. Other than that, well, I still dream of Canada many a time." V

Big Changes For Potato Industry

After watching new potato products like chips, frozen French fries, instant mashed potatoes and pre-peeled potatoes for the restaurant trade zoom to quick popularity, Ontario's associate field crops commissioner R. H. Goodin predicts: "We haven't seen anything yet. We are on the verge of the greatest change the potato industry has ever seen."

"It's a day of convenient foods," he said, speaking at the Eastern Ontario Soil and Crop Improvement Association meeting. "Housewives don't like peeling potatoes, and the development of instant mashed potatoes is the greatest innovation so far. The United States has 7 instant mashed (potato flake) plants now, and 5 more are being built."

Canada's pioneer potato flake plant at Alliston, Ont., swung into full production in December, and the quality of its product was very high. Mr. Goodin reported that the company grew 160 acres of potatoes itself last year, and contracted for 20 million lb. from district growers. He called this "just the beginning. Next year, the company will be growing 500 acres, and will be contracting for a lot more."

Since potato flakes came along, Mr. Goodin said that the quality of potato granules, or minute potatoes (a product made in the United States that comes into the country duty free) has improved.

Mr. Goodin predicted that potatoes are going to be used more and more for delicacies. "They'll be served just as we now serve hot dogs or sandwiches. There are recipes for potato paddies, and for potato puffs that can be made up and quick frozen-ready for pre-heating for a quick meal." V

Hank found the answer to his father's land problem . . . and solved some problems for himself and Jake at the same time

THE hills were that remarkable green that only a long wet spring can make, and Hank looked at Clare wondering if she noticed their magnificence. "Hank Johnson," the wind had caught and loosened her hair, "why didn't you bring me here sooner?"

"The same old excuse, Clare. Too busy." He'd used it much too often lately. "Haven't been here myself in three years."

And it was much longer than three years since he last climbed this hill. It had startled him to find himself out of breath when they reached the top. The past ten years had given him a lot, but they had collected their toll too.

From where they sat everything about his home looked the same. Familiar dark patches of timber broke the sea green spaces of the fields and the colored dots that were homes and barns were still there. Trying to absorb it all at once, he felt like a starving man who had just eaten a huge meal—filled, but not satisfied.

For the moment Hank was almost glad for the letter from his father that was the reason for them being here now. In all of his thirty-four years he could never remember his father asking him a favor. That was why he was so surprised to find the letter begging him to come home that evening when he returned to the apartment. It was still in his pocket.

DEAR SON:

I've never bothered you before with my problems, but this time I need your help. You remember old Jake Minter, the fellow everyone calls the hermit, who lives in that shack in the back timber? Well, now that they've built the new highway the land there is worth a lot more. A firm from your city has offered a tidy sum for that timber land and I could use the money. In fact, your mother and I need it. But I can't bring myself to tell Jake he will have to move. It just isn't in me, I've been too close to him too long. Could you possibly come and tell him for me? Bring your wife to be with you, we are anxious to meet her. I'll sure be thankful if you will do this for me.

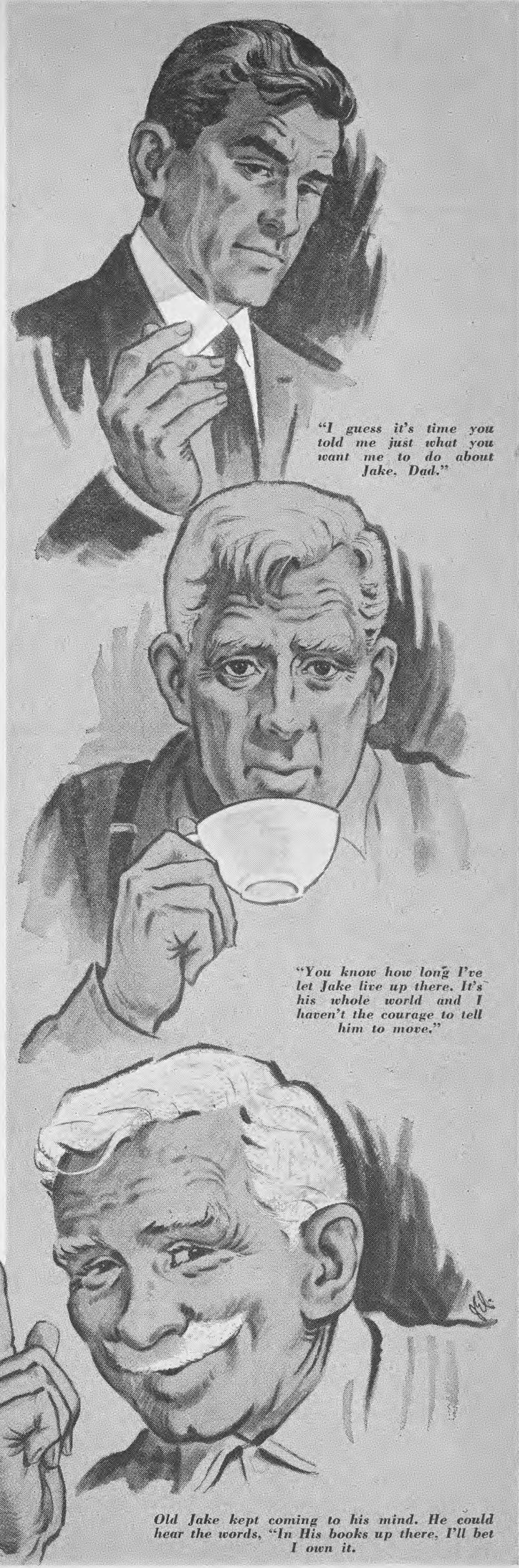
Love, YOUR DAD.

It was an odd request and a most difficult one. He was enough like his father to regard it as a hateful task and there was still the decision to be made about how it should be handled. Everything he had ever done for his folks had to be accomplished undercover to preserve Tom Johnson's pride, and he couldn't refuse this first outright entreaty.

"Your folks worship the ground you walk on, don't they, Hank?" Clare interrupted his musing.

"Only son, and all that, Clare. Actually, I'm afraid I was a big disappointment to them at one time. To Dad, anyway. He was pretty unhappy when I left to go to school, and then after my army service, he was really broken up when I decided to work in the city. He always said he wanted me to have a good education and a good job, but underneath he always hoped I'd stay on the farm."

At first his father tried asking polite questions, but Hank failed to make the world of real estate and land brokerage in the distant



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city comprehensible to him. Tom didn't even know the name of his firm.

"Don't you think he is over that now?" Clare returned to her questioning.

"I suppose."

"He most certainly knows of your success, your business!"

"He knows I've made some money, but he still doesn't understand the business. But he's very happy about you and that's what really counts. He even said he wished we'd set the date."

Clare laughed, and he watched her eyes cover the hills that were such a part of him: his boyhood. Time lost its importance while they sat there but the shadows stretching out were reminders that the afternoon had aged and suggested they go back to the house.

AT the supper table their conversation touched everything but the little old man in the woods who was foremost in their minds.

"Are there many wild animals around?" Clare asked Tom during a brief lull, the result of intense concentration on the strawberry shortcake.

"Not too many, although I've lost around nine chickens lately to a fox."

"I thought Shep kept them off?" Hank remembered how the collie watched the stock.

"Shep's getting old, like me," Tom shook his head.

Seeing his father last night had been a jolt. The man had aged twenty years in the past three. He moved slowly as if his bones were rebelling; he was thin; and his jeans bunched and wrinkled at his waist. But the snapping blue eyes defied the years.

"I'd like to get him." There was still vigor in his voice.

"Might be easier to fix the fences," Hank reasoned. His first glimpse of the farm had been something of a blow too; it had an unkempt look that had never before existed. The sagging fences, the peeling paint on the buildings, a barn door hanging on one hinge, and missing shingles on the machine shed roof just didn't belong on the Tom Johnson farm.

"Be cheaper to get the fox," Tom answered his son.

"I'll look around tomorrow," Hank promised. He decided not to wait any longer to bring up the subject of Jake Minter. "I guess it's time you told me just what you want me to do about Jake, Dad."

"It hurts to think about it, but, like I said in my letter, I can't afford not to sell at that price. A representative from the agency that's buying it was out two weeks ago and we finished the deal. You know how long I've let Jake live up there. It's his whole world." Tom paused a moment, "and I haven't the courage to tell him he's got to move."

"And you want me to give him the news, point blank?" There must be a way to make the task less impossible. He heard himself going on, "O.K., it won't be easy, but I'll go up in the morning." Before he could falter and express his real sentiments he turned to Clare, "Let's take another walk before it gets dark."

OUTSIDE the coolness was settling down over the farm. The wind had left with the sun, and they walked close to each other absorbing the precious quiet. Then Clare broke their stillness, "I'd love to live here, Hank."

"I knew you liked it, but not that much. Believe you mean it though," he searched her face.

"Umm." She took a deep breath. "Where did you say you were going to build your hunting retreat?"

Hank laughed. "You are serious!" "I am."

"Well, I hadn't decided for sure. But I'm getting anxious now that we've been here. I don't think it will be too long before I get going on it, but right now I can't get tomorrow off my mind."

"It's going to be rough, isn't it?"

"Yes." He wished it was over.

"Tell me about him, Jake, I mean."

"There isn't much to tell. He moved into that old hunting shack after his wife and boy suffocated one night in a sort of flash fire. It took his home, farm buildings and everything."

"How awful!"

"It was. I'll never forget it. Everyone for miles around turned up to try and help but it was windy and there wasn't much anyone could do but hold Jake so he wouldn't go in the house. It seemed he lost his heart and soul, too. Dad let him move into the

(Please turn to page 74)

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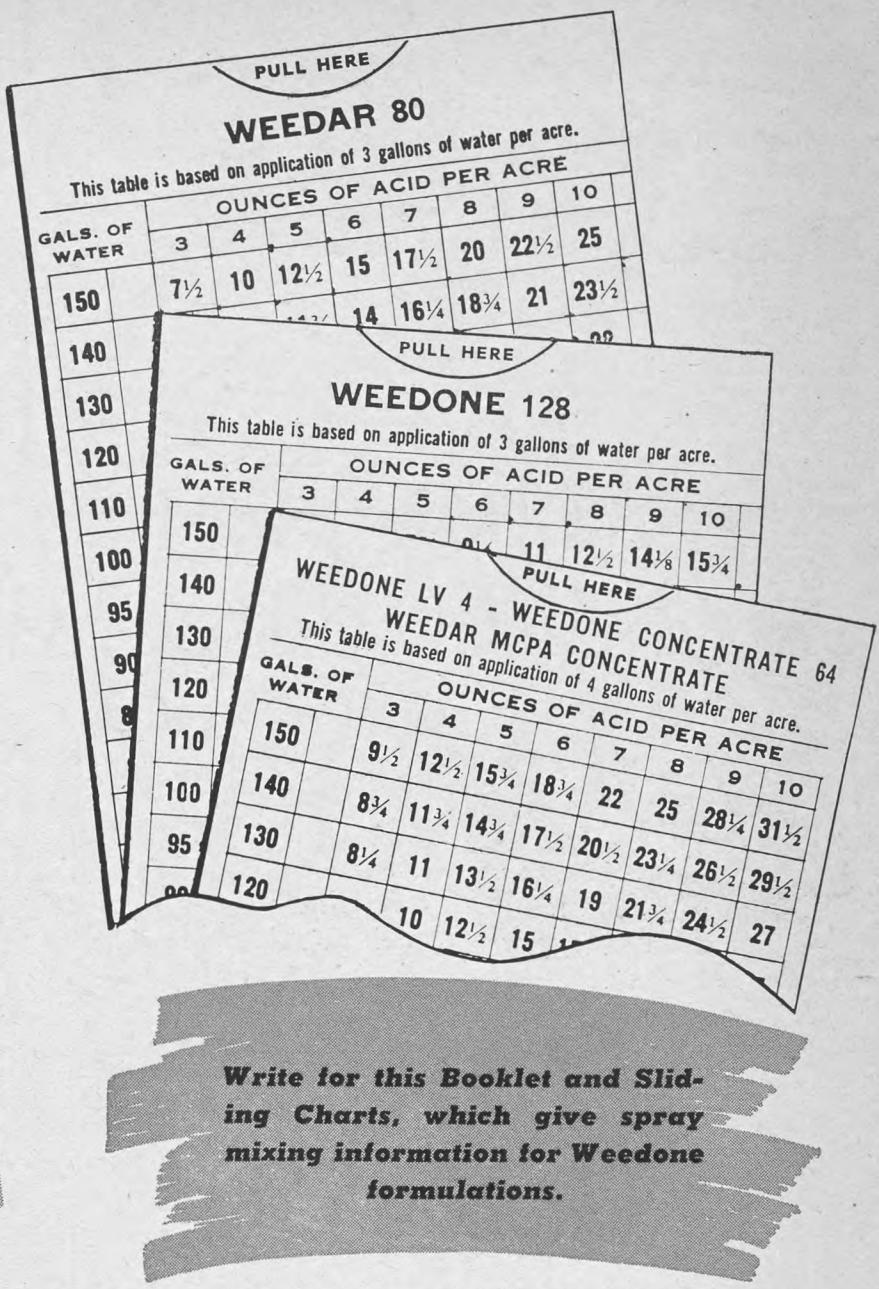
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IN THE SECOND HALF OF A CENTURY OF SERVICE TO THE FARMERS OF THE WEST

(Continued from page 72)

shack and he made a different life for himself, alone, up in the woods.

"What did he do?"

"He used to help Dad and some of the other farmers when they needed it. When he got a little money, he'd come down to the house and give it to Dad, 'my rent,' he'd say. Dad always figured he wasn't hurting anything and let him stay."

"He's too old to help your father now?"

"Yes, with any of the heavy work, work Dad can't do either."

"What will he do?"

"That's a good question," Hank knew she understood his problem. It will be the next thing to murdering him."

"Is there no other way?" Clare thought her questions might help Hank.

A whip-poor-will interrupted them as it called through the evening.

"Unless," Hank said half aloud.

"Unless?" She was watching him.

"Nothing, but . . . let's go back to the house. I've got to run into town and make a few calls."

Hank left Clare behind with his mother next morning. The sound of

chickens in back of the house reminded him of the fox and he stopped at the tool shed for the rifle. Strolling down the dirt road he paused to watch his father on the old tractor, going down the corn field. The sight of the dark rows of moist earth between the green lines of the corn was good. The familiar call of quail, as old as time itself, crossed the field, as he turned down a vague path leading into the big timber he used to call "the jungle." Here was the smell of decaying leaves on damp earth because the pale sunlight through the heavy overhangings was never enough to dry the soil.

Hank spotted Jake before the old man saw him. Perched on a rock in the small clearing by the shack, he was looking over the valley, his back to Hank's approach.

Careful not to startle him, Hank called, "Jake, how are you doing?" There was no doubt that the old man was glad to see him.

"Well, Hank," he repeated, "you aren't a boy any more. You're a man. Sit down, this is a good sittin' rock."

The sun was warm through his shirt as he sat there answering Jake's questions about the past ten years and waiting for an opening so he, too, could ask a few questions. "And now, Jake, you tell me what you have been doing."

The wrinkles became deeper with Jake's smile. "Well, I haven't covered the miles you have, Hank, but I've been busy right here just keepin' track of the world. You know there's a whole world in this woods and it takes a lot of time livin' with it. Seems strange to you, I suppose."

"I think I know what you mean, Jake." He believed him.

"I don't feel it's wastin' time, because watchin' this timber change with the seasons makes me interested in every passin' thing and every passin' minute it takes with it. I'm busy checkin' the young to see they're keepin' up as they should, and I'm always bumping into something different to do or wonder about."

They watched a pair of squirrels clamber up a nearby oak and disappear in the leaves.

"I know that in some book at the county courthouse it says your father owns this piece of land," Jake took in the timber with a sweep of his hand. "But in His books up there," he pointed to the sky, "I'll bet it says I own it because I love it so much and watch over it the year 'round."

As wild as it was, the area did have a tended look about it, almost the air of a formal garden but without its stiffness.

"It's the most beautiful spot in the world, Jake." Hank meant what he said.

"What's the gun for?" Jake nodded with distrust at the rifle.

"Dad has been bothered with fox lately and wanted me to look around. You haven't seen any, have you?"

"No." But his answer was too fast.

HANK turned back into the timber and continued his hike without finding any fox trails. Old Jake kept coming to his mind, disrupting his search. He could hear the words, "in His books up there, I'll bet I own it." Probably does, Hank agreed. So help him, he couldn't be a part of uprooting the guy.

"Back to the fox," he told himself, "if you could find some evidence or anything to tell them about the fox, maybe they won't smother you with questions about the visit with Jake."

It shouldn't be too hard to spot a den, although the fox would probably be well concealed, waiting for the cover of night before coming out.

There was one more place to look before heading back. He went toward the hill with the old cave. Moving to the rocks above the cave's entrance, he waited and listened, certain he had heard something make a noise.

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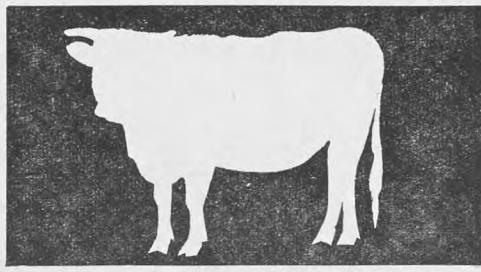
On the farm of Mr. Laurie Byers, Camrose, Alberta.

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Cautiously peering over the ledge he saw four fox pups at the mouth of the cave. Almost afraid to breathe, he stood watching them for a long time.

Two of them ran in a circle, one hanging onto the other's tail; the pursued pup kept turning and cuffing his tormentor in mock fury. The other two followed in hot pursuit, and then all four of them fell over each other in accidental collision. Their baby fur glistened in the sun and their fat bellies would turn pink side up as they rolled and wrestled in make-believe battle.

Quite suddenly they stopped, standing statue-still with ears pricked. The four heads turned toward the brush downwind from Hank as a small vixen came out carrying a partially dead rabbit. Apparently she had ventured out in the daytime to feed her growing family. Quietly and quickly she disappeared into the cave with them. Hank waited a few minutes before leaving. Then, half way back through the timber, he remembered to turn back to pick up the forgotten gun.

CLARE was on the porch. "I've been watching for you. How did it go?"

"I'm no hunter."

"You didn't get any fox," she smiled.

"I'll try again this evening. I still think Dad should put up new fencing," Hank stretched out on the swing.

"You know I'm referring to Jake. Did you see him?"

"Yes, I saw him." Hank pushed the swing with his foot and hoped she wouldn't ask any more questions.

"Well, how did he take the news?"

"I didn't tell him."

Clare didn't appear too surprised. Still, she tried to scold, "Hank!"

"I just couldn't. Besides . . ."

"Besides, you've got something up your sleeve, haven't you?" He didn't want to discuss it right now but nodded that she was on the right track.

"I'm going to town for a few minutes. Want to call the office. Care to ride along?"

THE harsh afternoon sun was softer in the woods and a breeze followed Hank as he returned to Jake's shack. Again Jake was by the door on his rock.

"Back so soon?" he queried.

"Yes." Hank joined him on the rock.

The grating of a cricket momentarily drowned out all other sound, and they waited for it to stop. "That's the first cricket I've heard this summer. Have to make a note of it," Jake said.

"Why?"

"Oh, always kind of feel the first cricket is the official notice that summer's really here. Always make a note of it. Much more reliable than a calendar."

Hank laughed and then became serious again, "Jake, I came back this afternoon because I want to make a proposition to you."

"I knew somethin' was eatin' you," the old man returned.

"I suppose you've noticed how close the new highway comes to this timber?"

"I'm not blind."

"Well, what you don't know, Jake, is that Dad is facing financial troubles that could be serious."

"I said, I'm not blind."

"No, you certainly are not," Hank wanted to add as he realized he wasn't telling Jake a thing, yet. "Anyway, he has been offered a good price for this whole timber."

"There's been a lot of fellas lookin' the place over, measurin', and stuff. I talked with them too."

THE surveyors had missed seeing his father, but Jake hadn't missed seeing them. Hank saw a prepared look on the lined face, and the eyes were guarded. The poor guy has been getting ready for this, he thought.

"It happens I know the president of the firm that is going to buy the land, Jake. At first he was thinking of building homes through here. But he doubts the practicality of that, for now, anyway. So he decided to wait, maybe use the land himself someday, you know, when he retires. Build a hunting lodge or something."

Jake was still wary, but there was a flicker of life behind the shielded eyes.

"So," Hank continued, "he wants an overseer for the place. You know, someone who can be here all the time and watch it, not let campers litter it, or hunters use it during off seasons, and things like that."

"Oh," Jake nodded his approval.

"And, when I talked it over with him, from Dad's angle, you see, I told him about you, that I thought



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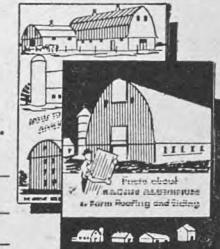
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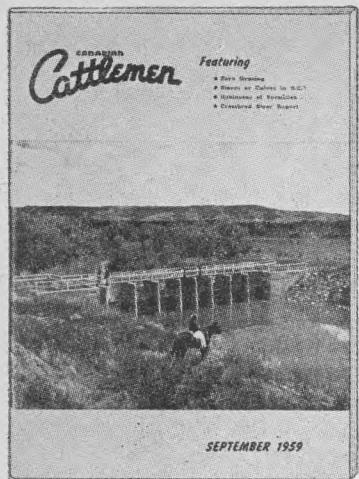
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"Sometimes I wish Mother and Dad were nearer our own age."





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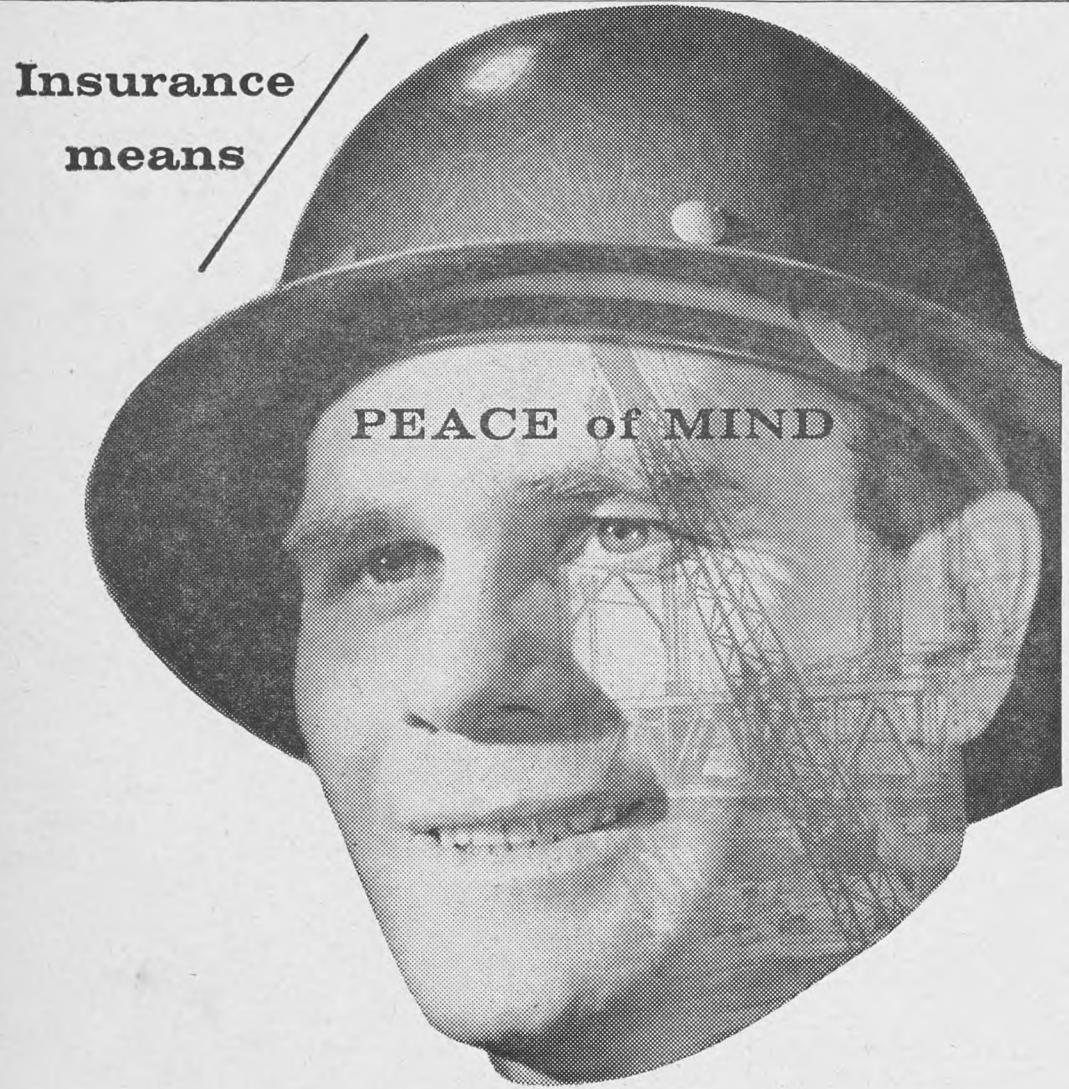
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you just might consider the job. What do you think?"

Jake wasn't looking at him and Hank thought the old man would never answer.

"I'll have to think it over, Hank."

"Of course. The pay will be small, but I know you would be the best man."

"Why didn't you tell me all this this morning?" Age hadn't dulled his wits.

"What? Oh, I don't know, Jake. I came up to see how you were feeling and I had to decide if I thought you were physically able to do it." Hank waited for an answer.

"I'll tell you what. I think I just might be interested. Give me a few days, then I'll write the boss and give him an answer. You tell him not to hire anyone else 'til he hears from me and I'll let him know within a week. Is that O.K.?"

"Sure, Jake," Hank wondered why the stall.

"Give me his address."

Jake produced some paper.

"Just write to the president of the J & L Real Estate agency. Here's the address."

After the car was packed and ready to go, Hank sat down on the porch with his father to explain what he had done. "I didn't want to tell you before I talked to Jake, Dad. It probably seems sort of sudden to you, but I knew it wasn't too definite that the firm would develop the area in the near future. Anyway, I thought you might spill the beans."

"True, true." Tom had to agree with him.

"Then if it didn't work out, it would be a double blow. But now it's all arranged."

"You have no idea what this means to me, Hank." Tom was grateful.

Hank felt he did know.

"By the way," Tom had almost forgotten, "how did you come out with the fox?" Hank knew his father had dismissed the fox in his relief to find the other problem solved.

"I saw her, but she was a fast one," he paused. Then "Clare likes it so well here, we thought we'd drive out in a month or so for another week end. That is, if you don't mind."

"As if we ever would!"

"Then I could help you fix the fencing around the chicken yard. We could set the posts and bottom wire in cement, make it fox proof."

"Good enough!" The tone of his voice told Hank all was well.

Dusk had moved into night as they waved good-by to his folks. Hank thought his father looked younger than he had two days ago when they drove in the driveway. It made him feel better.

"Mission accomplished," he announced to Clare.

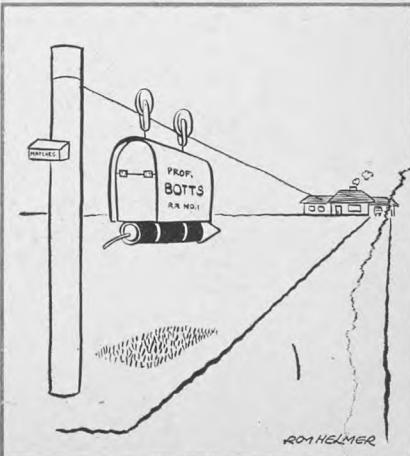
"I didn't know my fiance was such a fox," she answered.

"I didn't know mine was such a wise old owl." Hank tossed back to her. The moon was bright and he thought of the four pups, at the mouth of the cave, playing together in its light. And he was satisfied.

It was a week to the day when Hank spotted the wrinkled envelope on the top of his morning mail. Postmarked from home, he knew it was from Jake. Opening it carefully, he smoothed out the sheet.

"Dear Mr. President of the J & L Real Estate Agency,

This is to let you know I accept the job of overseer of the timber land you purchased from Thomas Johnson. I hope I will do it well. Sincerely, Jake Minter, P.S. Is it all right to tell your father you hired me?"





[Bob Taylor photo]

Who loves a tree he loves the life
that springs in star and clod;
He loves the love that gilds the clouds
and greens the April sod;
He loves the Wide Beneficence.
His soul takes hold on God.

A tree is one of nature's words,
a word of peace to man.
A word that tells of central strength
from whence all things began.
A word to preach tranquility
to all our restless clan.

—From a poem by SAM FOSS.

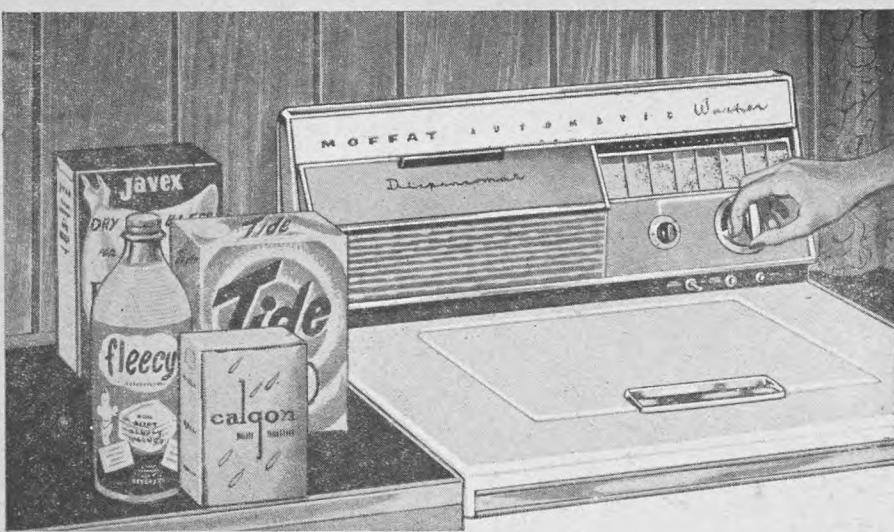
April Outlook

THE mounded, slow-warming earth imparts its own spring feeling. The rough, rutted tree bark offers itself as a ladder to a higher lookout point. Earth and tree's broad limb are a part of the seasonal reawakening, spring's miracle of rebirth.

Hands recently mittenred against cold and snow now finger the dormant earth and sense a sharing of the sun's bright warmth. A restless breeze rustles a fringed hat just as it whispers among unharvested seeds. It rouses a response from branches brittle with winter's sleep.

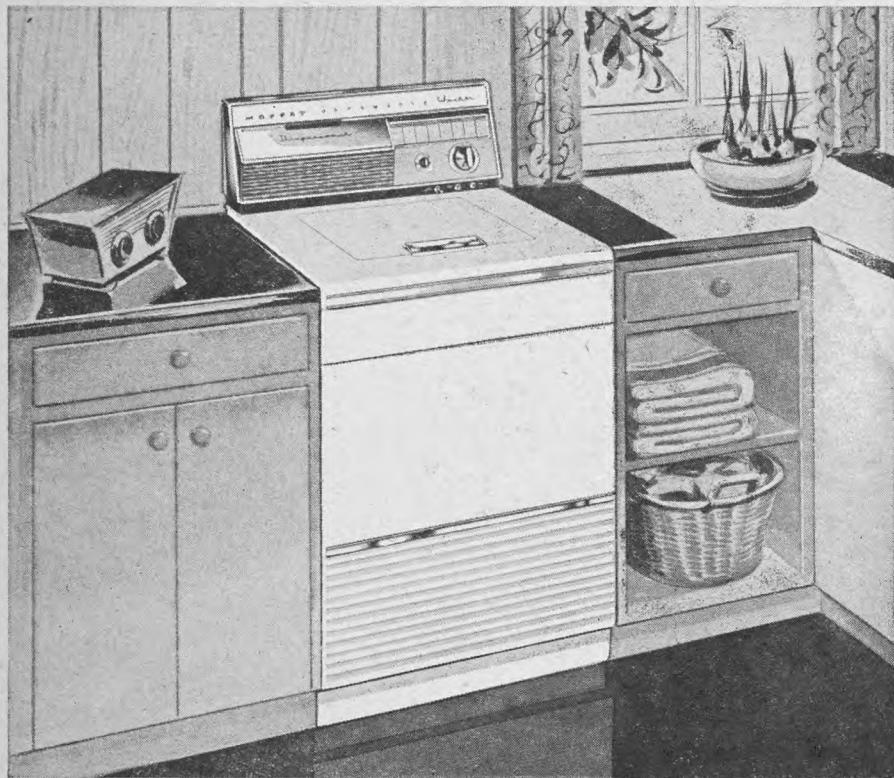
Boy and all out-of-doors barely contain their new vigor. Unleashed, the boy may whoop and run; sown, the earth will sprout new cover; warmed and moistened, the black etched branching will burst into bud.

Spring is a feeling. Spring is an infectious smile—and who alive can help but smile in return?—G.L. ✓



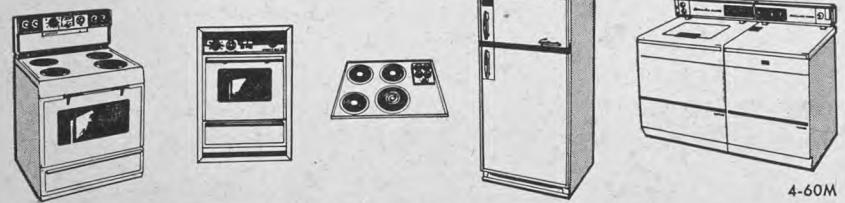
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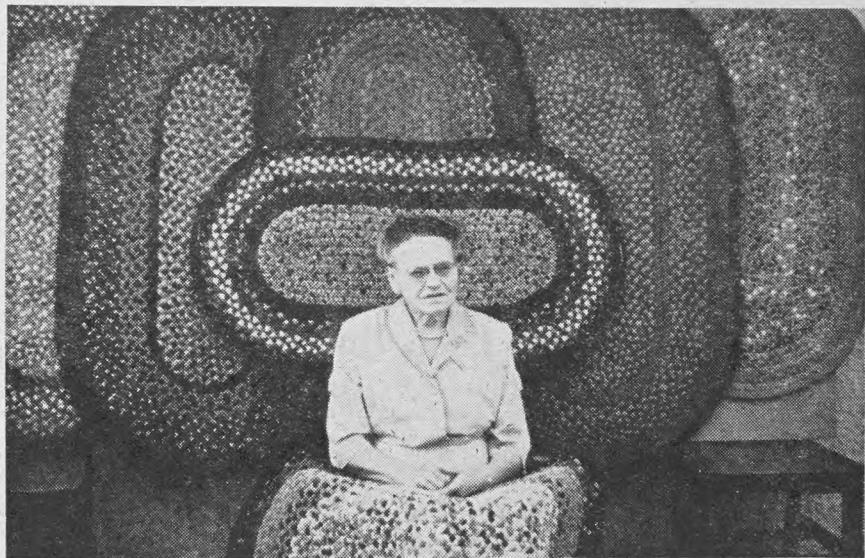
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Rugs in Retirement

This Alberta farm wife developed a prize-winning hobby for leisurely days



Guide photo
In a well-earned retirement, Mrs. Jim Hannaford makes prize-winning rugs.

FARM wives who wonder what they'll do with themselves when their children are married and making homes of their own, should take a leaf from Mrs. Jim Hannaford's book and develop some interesting hobby.

When the Hannafords decided to retire in Calgary after over 40 years of farming, they built a small trailer and headed south to Arizona for the winter. Knowing that her husband would spend most of his holiday fishing, Mrs. Hannaford took along a sack of old clothes, which she tore into strips and wove into an attractive rug.

Back home in the spring, she entered her rug in the Calgary Exhibition and won first prize. Since then, the Hannafords have made five more trips to Arizona, Mrs. H. has produced five more rugs—and won five more first prizes.

The winters in warm, sunny Arizona were a far cry from winters Mrs. Hannaford had known during her early days on the farm. At the age of 18 she left England for Canada, arriving at Fleming, Sask., in June, 1904. She worked on a farm there until the end of harvest, then got a job doing housework in Moosomin for \$10 a month. Two years later she married Jim Hannaford, and went to live on his homestead just south of town.

Earlier that year, Jim had been visiting the Winnipeg Exhibition where he saw a tent with a sign on it that read: "Put the Farmer in Business." When he went in to have a look, he met a man named E. A. Partridge of Sintaluta, Sask., who induced him to buy a couple of shares in a farmers' co-operative being formed called "The Grain Growers' Grain Company." Back home, Jim started selling shares himself. He was the first one to ship a carload of grain to the new company, which years later became the United Grain Growers Ltd.

By 1911, the Hannafords had had two additions to their family (both boys), and they began to realize that their 160 acres of land wouldn't be

enough. They decided to go farther west and take up a section north of the Red Deer River, about 60 miles from Brooks, Alta.

Mrs. Hannaford stayed in a small shack in Brooks that first summer, while her husband joined other homesteaders moving stock and equipment across the Red Deer via team and wagon—a journey which took from 10 days to 2 weeks. In town, she made many friends among other homesteaders' wives from all parts of Canada and the United States.

By the end of October, a shack and barn had been completed on their new homestead, and a covered wagon fixed up to take her and the two children there. It was 60 miles from any town and the trip took 5 days. The family just got settled in when a snowstorm came down from the north, and with it, large flocks of geese and ducks southward bound.

THE first winter on the open prairie was a lonely one for Mrs. Hannaford for she never saw another woman until the following May. By summer, however, she had a fine garden growing, and her husband had laid the foundation of a large house.

The Hannafords moved into their new home in the spring of 1913. That year the crop was so good they had to buy a threshing outfit to handle the accumulated stacks of grain. When word got around about the thresher, farmers came from as far as 40 miles away to see if Jim would thresh their grain. Finding himself suddenly in the custom threshing business, Jim built an 8' by 16' cook car, complete with stove, table, benches, dishes and utensils. Mrs. Hannaford went along in a horse and buggy with her two small children, to do the cooking—which in those days meant baking all the bread and keeping the fire just right in the crude wood-burning stove.

The following spring Mrs. H. gave birth to a daughter, an event welcomed by her two small sons because there were no other children in the district. But gradually more people

(Please turn to page 80)

Spring and Crocuses

by ONA LACY HUNTER

HERE is nothing more delightful and welcome than a Saskatchewan spring after the deadening lethargy of winter. With the first mild winds, the snow softens and becomes honeycombed with black earth particles. Exciting expectations stir the housebound.

When I lived on a homestead in the twenties, I could scarcely wait for the snow to melt to go in search of crocuses. I knew a certain place on the southern slope of a hillside in our pasture, where they always popped up first, even when they had to push their way through the remaining snow.

What ecstasy it was to see them, with their delicate mauve faces, wrapped closely against the lingering cold by their pale green fur jackets! I always wondered at their courage—how could anything so fragile and lovely push its way up through the still frozen ground? Then I would think, God knows what He is doing. It's not for me to question His ways, but to accept them and, in the case of spring crocuses, rejoice that they come early to awaken my hibernating spirit. Could it be a "Spirit that lurks each form within, Beckons to spirit of its kin," in me? I believe so, for I never could pull the first scattered specimens; they touched me so poignantly by their determination to survive at any cost.

Later, when the hillside became dotted with crocuses, I would gather a handful to take home. How they brightened a room and brought happy anticipation of the warm summer days soon to come!

One must live in a cold climate to appreciate spring fully when it comes. When I lived in southern California, where the change in seasons is scarcely perceptible, I became extremely bored with the sameness of the flowers and the weather. There were none of the pleasant surprises a Saskatchewan spring can bring.

One spring, in addition to the first crocuses, I found three nests in the tall grasses and reeds near a slough. One belonged to a wild duck, another to a ground owl, the third to a prairie chicken. All of them were within a few feet of each other. I visited that spot regularly after that, waiting out the days for the eggs to hatch. There was an added thrill when the baby ducks took to the water.

Like the crocuses, wild fowl come early in the spring, as if they, too, are impatient for the snow to melt and soft winds to blow again. As Emerson aptly states—"These enchantments are medicinal; they sober and heal us." At least, they always gave me a needed lift.

Now I think back with nostalgia to those carefree days when I was young in a young and beautiful world of endless prairie spaces where the soul could expand. I am thankful for my memories. Time doesn't dim them greatly. A moan from the west wind or the cry of the wild geese flying northward in the night will carry my thoughts to a low hillside in Saskatchewan to search for the first crocus under a sky as blue as gentians; in air that makes one's blood bubble with newness.

If you have never searched for crocuses, do try to get out this spring. You will be well paid in peace of mind and rejuvenation of body. V

Flower Lore

MANY of us associate our experiences with various flowers—perhaps a childhood bee sting after nosing an occupied posy, perhaps the nostalgic memory of a bridal bouquet. Flowers have meant different things to different people since ancient times.

The shy violet was thought by the ancient Greeks to induce sleep and reduce anger. Scots considered it bad judgment to pluck a pansy on a pleasant day since rain would certainly follow. In the folklore of Wales the daffodil is a symbol of wealth and legends insist that the first daffodil of spring will bring more gold to its discoverer than he has seen before. On the Isle of Man, the daffodil is known as "Goose Leaks" and Manxmen regard its bloom with misgivings. They consider it unlucky to bring the flower indoors before the goslings are safely hatched.

The daisy was variously believed to cure toothaches, headaches, gout, and rheumatism. The daisy was also a symbol of luck and trust. Some believed that one lucky enough to tread on the first daisy of the season would be married within the year.

The rose is reigning monarch of the flower kingdom in the minds of many flower fanciers. It also speaks of love; brings to mind a prolonged English civil war; and occurs in ancient Roman history as an ingredient in many medicines. Romans ate roses in salads and candied them for preserving in jars.

Forget-me-nots were once believed to have supernatural powers capable of healing bites from serpents and mad dogs, and were later used in poultices for sore eyes. Medieval knights believed that steel tempered in the juice from this fragile flower would be strong enough to cut stone.

Whether flower lore be fact or fiction, the mysterious and perfect beauty of a single bloom, whether it be rose or tulip, violet or daffodil, evokes an appreciation for the wonders of the universe. V

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You'll need

for the dough:

3/4 c. milk
1/4 c. granulated sugar
2 tsps. salt
1/4 c. shortening
1/2 c. lukewarm water
2 tsps. granulated sugar
2 envelopes Fleischmann's Active Dry Yeast
2 eggs, well beaten
4 c. (about) once-sifted all-purpose flour

for the filling:

1 c. coarsely-chopped onion
1/4 c. butter or Blue Bonnet Margarine

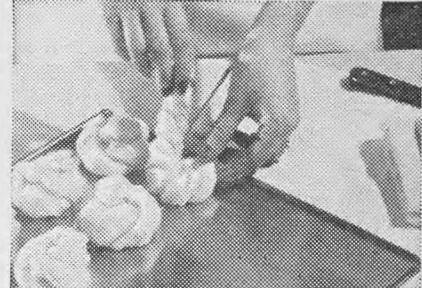
for the topping:

1 egg yolk
2 tsps. cold water
poppy seeds

1. Scald milk, stir in 1/4 c. granulated sugar, salt and shortening. Cool to lukewarm.



2. Meantime, measure lukewarm water into large bowl and stir in 2 tsps. sugar. Sprinkle with yeast. Let stand 10 mins., then stir well. Stir in lukewarm milk mixture, well-beaten eggs and 2 c. of the flour. Beat until smooth and elastic. Work in remaining 2 c. (about) flour.



3. Knead dough until smooth and elastic. Place in greased bowl. Grease top. Cover. Let rise in warm place, free from draft, until doubled—in bulk—about 1 hr. Meantime, slowly cook onion in butter or margarine, stirring often. Cool.

4. Punch down dough, knead until smooth. Roll out to 12" x 18". Spread 1/2 dough lengthwise with onion mixture, cover with unspread 1/2 of dough and cut crosswise into 18, 1" strips. Twist each strip several times, then place one end on greased cookie sheet and wind rest of strip around it; tuck end under. Cover. Let rise until doubled—about 3/4 hr. Brush with mixture of egg yolk and cold water. Sprinkle with poppy seeds. Bake in hot oven, 400°, about 15 mins. Makes 18 savory buns to serve with soup, salad, cold cuts.



"Think anyone will notice it?"

Clip and Save Sewing Hints

THREAD and NEEDLE CHART

Vital sewing facts and figures at a glance

NATURAL FIBERS

Types of Fabric	Thread	Sewing Machine Needle Sizes	Machine Stitches Per Inch	Hand Needle
FILMY MATERIALS Net, Marquisette, Ninon, Organdie	100 Cotton 0 and 000 Silk	9	16	10
SHEER MATERIALS Lawn, Dimity, Voile, Batiste, Chiffon, Rayon Sheer, Rayon Crepe	80 to 100 Cotton 0 Silk	11	16	9
LIGHTWEIGHT MATERIALS Gingham, Chambray, Sheer Wool, Crepe, Taffeta	60 to 80 Cotton A & B Silk	14	12	8
MEDIUM LIGHTWEIGHT MATERIALS Poplin, Pique, Percale, Cretonne, Chintz, Faille, Bengaline, Wool Flannel, Wool Crepe, Wool Jersey	50 to 70 Cotton B Silk	14	12	7 or 8
MEDIUM HEAVY MATERIALS Crash, Gabardine, Corduroy, Velveteen	30 to 50 Cotton C Silk	16	10	6
HEAVY MATERIALS Sailcloth, Denim, Ticking	16 to 24 Cotton	18 or 19	8	4 or 5
VERY HEAVY MATERIALS Canvas, Duck	40 to 60 Linen 8 to 12 Cotton	19 or 21	6	3
SYNTHETICS				
FILMY Nylon Net, Marquisette, Chiffon, and Organdy types	Dacron Nylon	9	16	10
SHEER Thin Taffeta, Shantung, Shirting or Madras types	Dacron Nylon	11	16	9 or 10
LIGHT AND MEDIUM LIGHTWEIGHT Velvet, Chambray, Crepe, Light-weight Suitings, Linen, Firm Shantung and Surah types	Fine Mercerized Dacron Nylon	11 or 14	12	8 or 9
MEDIUM HEAVY Coatings, Suitings, Corduroy types	Mercerized Dacron Nylon	14 or 16	10	6 or 7
HEAVY Found in Heavy Coatings	Heavy Duty Mercerized Dacron Nylon	16	10	5 or 6
PLASTIC MATERIALS	Nylon or Mercerized Cotton	11	10	None

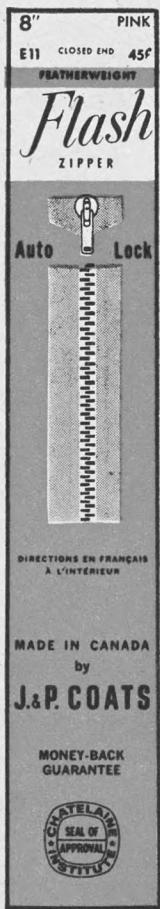


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Trousseau Time

No. 9337. There's dainty dignity for both bride and bridesmaid in this gown. Featured are a full skirt with smooth panel front, deep inverted back pleat, fitted dropped bodice with V back. Misses' sizes 10, 12, 14, 16. The pattern price is 75¢.

No. 9343. This versatile jacket dress is equally adaptable to travel and home living. The cropped double breasted jacket tops a trim cummerbund sheath with hip pockets and back pleat. Jr. Miss sizes 11, 13; Misses' 12, 14, 16. Price is 65¢.



No. 7559. A light frosting of lace trims these shortie pajama styles. Both pajama tops and brunch coat feature a cape yoke. Pattern also includes a 2-piece lounge set. Misses' 12, 14, 16, 18, 20. Price is 35¢.



No. 9260. A becoming afternoon dress for showers or trousseau tea, a dance dress and a square-necked casual cotton can all be made from this pattern! Junior Misses' 9, 11, 13; Misses' 12, 14, 16. Price 50¢.



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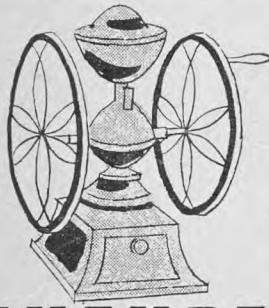
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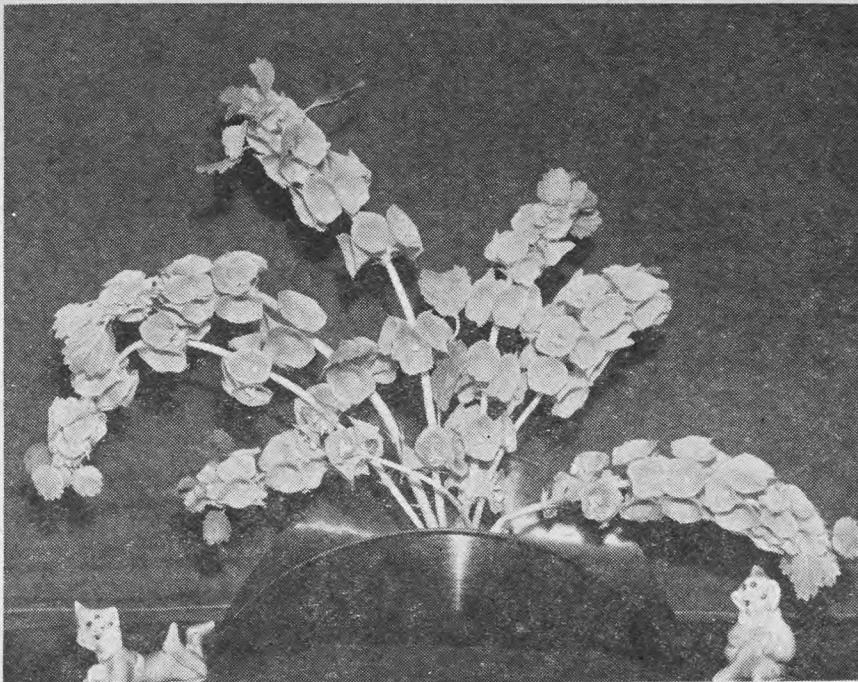


Illustration No. 1—It really is fun, and certainly not difficult, to make an attractive basket-like container like this, using an old phonograph record.

New for Old

by JEWELL CASEY

If you have not tried your hand at converting old phonograph records into vases, bowls, flower pot holders and other useful items, you have missed some fun!

You can use old scratched records, or discards, and they should be the ones made entirely of wax and not have pasteboard filling. The latter kind can be used, but not as successfully as those of pure wax.

Decide on the article you wish to make and have at hand a bowl, vase or something similar to serve as the mold. Now place the record in a medium warm oven and carefully watch until it begins to "droop," at which time it is pliable. Use cloths to handle the hot record so as not to burn your fingers. Place the warm record on the mold and quickly shape the warm wax into the desired shape. You will have to work quickly as the wax soon hardens. However, if you don't get the desired shape the first try, the record can be re-warmed and re-shaped.

Four-cornered bowls, three-cornered bowls, wall vases, flower baskets, cookie plates, fruit bowls and dish

gardens are only a few of the items that can be made from your old records.

After obtaining the desired shape, the article may be painted, or left in the pretty glossy black. In painting record-items, use thick enamel, rather than thinner paint, because the thin paint has a tendency to run off the glossy surface. Cut-outs, or decals can be used to cover centers, both inside and outside.

Illustration No. 1: A large record was used in making this basket-like container. While pliable, a 3-inch board was laid between two supports and the record was hung over it, giving a flat bottom and slightly slanting sides. Bells of Ireland sprays are used effectively in the basket, and are held in place with a flower frog. But other dried material would be equally pretty. The basket was left in the natural black color.

Illustration No. 2: This dish garden, given a pretty shape, was made just deep enough to hold soil and was painted a scarlet red. Setting it on a slab of polished wood with bark intact, the garden was planted with

coleus, ivy, wandering jew, bits of wild grass, and other tiny plants. Plants will live for several months when set in either soil or peat moss, if they are watered regularly. However, guard against giving them too much water.

A dish garden is always a welcome gift, especially to an invalid. And the record bowl makes such an attractive container.

Illustration No. 3: Two records were used in making this wall vase and plaque. A cone was formed from the pliable record. It was flattened at the back by laying it on a flat surface until cool. Both the record used as a background and the vase, were edged with gold paint. Four colorful decals of Dutch design were applied to the background. A small jar, such as the kind that olives are packed in, fits inside the vase so that cut flowers can be used. However, dried material, such as various kinds of seed pods, are also attractive in a wall vase.



Illustration No. 3—A wall plaque and cone shaped vase decorated with decals.

INSTEAD of a vase, this may be used as a holder for scissors. Wherever color is needed, plaques may be made from records. Various designs, such as western scenes, are pretty to use on the record plaques. If a vase is not used, it will be necessary to cover the center of the record. A heated ice pick will make a hole at the top of the record which can be used for hanging the decoration.

A black bowl is a pretty complement for either artificial or fresh fruit, or colorful flowers.

It is a good idea for the beginner to cut a piece of pasteboard (sufficiently pliable so as to be workable) the size of an ordinary record, and practice shaping it into various forms before beginning work on a record. In this way you will not only get the "feel" of using the round material, but you will be amazed at the many different shapes you can achieve.

Anyone can buy bowls, baskets and vases, to be sure! But isn't it always thrilling to make things yourself, especially from material that is usually considered worthless? It certainly gives one a feeling of accomplishment. Besides that, it's fun!



Illustration No. 2—This dish garden will certainly be a conversation piece.

Our Readers Suggest

The best interlining for hot dish pads is a discarded nylon stocking, folded three times. It is better than ordinary interlining in that it gives less bulk and better insulation and dries in a minimum of time. If a small magnet is sewn inside one corner, the hot dish pad will adhere to the side of your stove, fridge or sink. When laundering it, be sure to take it out of the machine. You will find that it sticks to the metal on the inside! —Helen Marquis, Wild Rose, Sask.

* * *

Store extra bars of toilet soap in your lingerie drawers. The soap won't take up much space and will impart fragrance to your clothes.

If you need a wide piece of waxed paper for a special purpose, seal two strips together with a hot iron.

Having trouble getting your daughter's can-can petticoats stiff enough? After washing and wringing them, dip petticoats in a solution made from 1 quart boiling water and 1 cup epsom salts. Wring and hang them up to dry. They'll hardly need ironing and will have the desired stiffness.—Mrs. Ernest Miller, Lansing, Mich.

* * *

Save the water defrosted from the refrigerator and deep freezer. It is distilled and suitable for the steam iron.

When I see a nice picture suitable for a frame, I cut it out to fit the chosen frame. I keep four or five in each frame and periodically change the one on top. This saves the added expense of extra frames and saves the space taken in storing extra framed pictures.—Mrs. William Bunney, Yeoford, Alta.

* * *

An empty adhesive tape container is excellent for storing a measuring tape. Wind the tape on the spool and slip the cover over top. The measuring tape is kept straight, smooth and neat.—Mrs. M. Beckie, Bladworth, Sask.

* * *

Try tying a plastic bag on the food chopper when grinding dry bread into crumbs. The crumbs will fall into the bag. When you have finished and can untie the bag, all the crumbs will be in it and not scattered all around.—Mrs. Paul Osinchuk, Bruce, Alta.

* * *

When traveling by car, you'll find that a shoe bag hung over the back of the front seat makes a fine container for all sorts of equipment.

Linoleum strips cut to fit under your house plants on window sills will save the finish on the sills.

Before giving a child nasty-tasting medicine, rub a piece of ice over his tongue. He will be unable to tell whether the medicine is sweet or bitter.

To make your own paint remover, 2 lb. sal soda and 1/2 lb. lime in hot water. Apply to paint while solution is still warm and it will loosen the paint so that it can be easily removed.—Mrs. Art Smith, Baddeck, N.S.



Look what you and your Magic can create!

It's a joy to make cloud-light and heavenly baking powder biscuits with Magic. And look: this basic recipe offers you four delicious variations! Why not bake a batch for dinner?

MAGIC BAKING POWDER BISCUITS (basic recipe)

3 cups once-sifted pastry flour
(or 2 1/2 cups once-sifted all-purpose flour)
6 teaspoons Magic Baking Powder
3/4 teaspoon salt
1/2 cup chilled shortening
1 cup milk

Sift flour, Magic Baking Powder and salt into a mixing bowl; cut in shortening finely. Make a well in dry mixture; add milk and mix lightly with a fork, using just enough milk to make a soft but not sticky dough. Turn out dough onto a lightly-floured board or canvas and knead lightly for 10 seconds. Roll out to 3/4-inch thickness and cut with a floured 2 1/2-inch cookie cutter. Arrange, slightly apart, on greased cookie sheet. Bake in a hot oven, 450°, about 12 minutes. Yield — 12 to 14 biscuits.

4 Easy Variations

CHEESE BISCUITS: Reduce shortening to 1/4 cup and before adding milk, mix in 1 cup shredded process cheese. Brush unbaked biscuit-tops with milk and sprinkle with sesame seeds when available. Delightful with salads, egg dishes or jam.

TOMATO BISCUITS: Replace salt with onion salt and milk with tomato juice. Wonderful accompaniment for salads, cold cuts, fish and eggs.

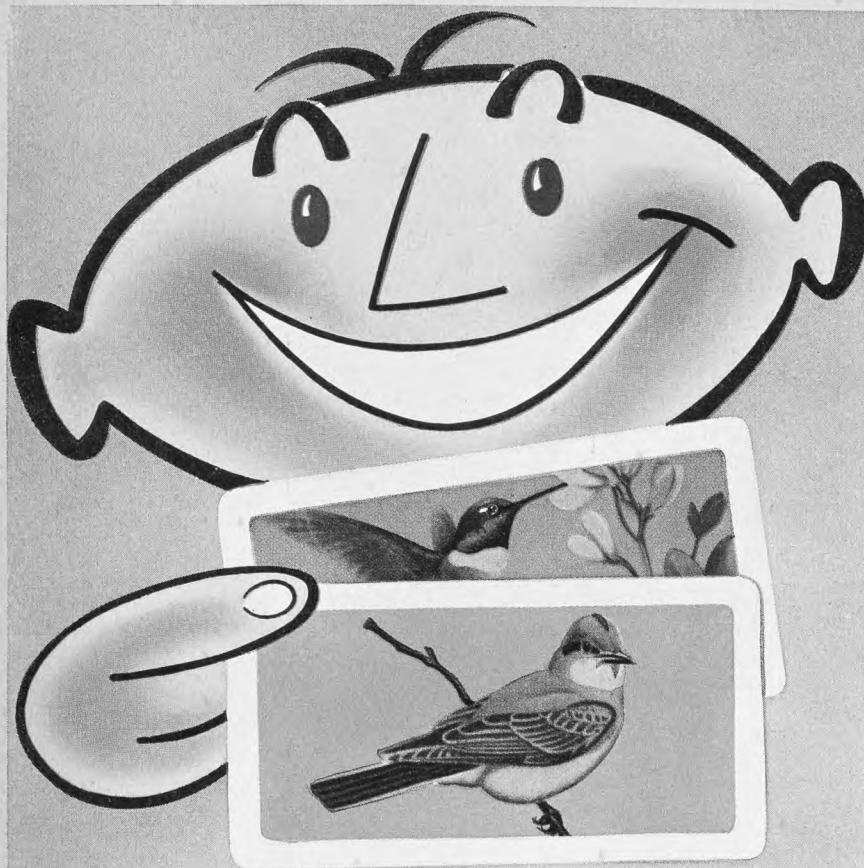
SPICED RAISIN BISCUITS: Sift 3/4 teaspoon ground cinnamon, 1/8 teaspoon ground cloves and 1/4 cup fine granulated sugar with the flour; before adding milk, mix in 3/4 cup raisins. Lightly-spiced and delightfully sweet — luscious at tea-time.

CHILI BISCUITS: Sift 1 teaspoon chili powder with the flour; replace 1/3 cup milk with 1/2 cup thick chili sauce. These savory biscuits do wonders for bland foods.

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a spring sign promising year-round*

Maple Treats

MAPLE syrup is one of the real links we have with life in early Canada, and a tasty heritage it is! Used right from the can or bottle on pancakes, waffles, Johnny cake and puddings, its delicate sweetness and distinctive flavor are bound to please. The recipes below, featuring maple syrup, offer taste-tempting treats you'll want to serve often.

Most of the maple syrup sold in Canada is graded:

Canada Fancy—very light amber color, delicate flavor.

Canada Light—light amber, mild flavor.

Canada Medium—dark amber, stronger flavor.

Canada Dark—dark color, sometimes bears a trace of sap flavor or fermentation.

As the color deepens, the flavor tends to become stronger, thus many people prefer the darker grades.

Once a can or bottle is opened, it should be covered and stored in a cool place. Syrup bought in large containers which have been opened is best stored by bringing syrup to a boil, then sealing tightly in sterilized sealers. Store in a cool, dry place.

Maple Syrup Cake

1/2 c. shortening	1 tsp. salt
2 1/2 c. sifted cake flour	1 tsp. vanilla
1/2 c. sugar	1 c. maple syrup
3 tsp. baking powder	1/2 c. evaporated milk
	2 eggs

Combine maple syrup and undiluted evaporated milk.

Measure shortening into mixing bowl. Sift together the sifted cake flour, sugar, baking powder and salt into bowl. Add vanilla and 1 cup of the syrup-milk mixture. Beat 2 minutes with electric mixer or with 300 rapid strokes by hand. Keep batter scraped from sides of bowl during beating. Scrape bowl and beaters, then add eggs and remaining 1/2 cup of syrup-milk mixture. Beat 2 minutes more or use 300 strokes. Pour equal amounts into two 9-inch layer cake pans, greased and lined with two layers of waxed paper.

Bake in a moderate oven at 350°F for 30 to 35 minutes. Cool on cake racks. Fill and frost with maple frosting.

Maple Frosting

1 egg white	1 T. corn syrup
1/2 c. brown sugar	Pinch of salt
1/2 c. maple syrup	

Combine ingredients in the top of a double boiler over hot water. Beat with a rotary beater or electric mixer at high speed for 7 minutes or until frosting is of spreading consistency. Spread on cooled cake layers.

Grand Peres

(Maple Dumplings)

2 c. maple syrup	4 tsp. baking powder
2 c. water	2 T. butter or flour
2 c. sifted pastry flour	shortening
3/4 c. milk	1 tsp. salt

Combine maple syrup and water in a wide saucepan with a tight-fitting lid. Bring to a boil. Sift and measure pastry flour, then sift again with the baking powder and salt. Cut in shortening. Add

milk all at once. Mix lightly and drop by spoonfuls into the boiling syrup. Cover the kettle and cook 20 minutes without removing the lid. Serve at once. Yields 6 servings.

Maple Rice Pudding

1/4 c. rice	2 egg yolks, well beaten
2 c. milk	2 1/2 T. cornstarch
1/2 c. maple syrup	Maple meringue

Cook rice in boiling salted water until tender, about 15 to 20 minutes. Drain. Scald milk in double boiler. Stir cornstarch smooth in 1/2 c. maple syrup and add gradually to the hot milk. Stir until the mixture thickens. Cook 15 minutes. Add rice and well-beaten egg yolks. Spoon into buttered baking dish. Top with maple meringue and bake in a moderately slow oven at 325°F until delicately browned, about 15 minutes. Yields 6 servings.

Maple Meringue

2 egg whites	1/8 tsp. cream of tartar
1/4 c. maple syrup	

Beat egg whites until frothy. Add cream of tartar and beat until mixture will peak. Gradually beat in maple syrup. Yields sufficient for pudding or 9-inch pie.

Maple Butter Tarts

Unbaked pastry shells	2 eggs, beaten
6 T. butter	1/4 tsp. salt
1 c. brown sugar	2 tsp. vinegar
1/2 c. maple syrup	2/3 c. walnuts, chopped

Cream butter. Gradually add sugar, then mix in remaining ingredients. Spoon into pastry-lined tart pans. Bake in a moderate oven at 350°F until set, about 20 minutes. Makes 12 to 16 medium tarts.

Maple Mousse

1 c. maple syrup	1 1/2 c. whipping cream
3 egg yolks, beaten	

Combine beaten egg yolks and syrup in the top of a double boiler over hot water. Cook until thick, stirring constantly. Cool.

Whip cream and fold into syrup mixture. Freeze firm without stirring.

Maple Pull Taffy

1 c. maple syrup	1 T. butter
1/2 c. sugar	1/8 tsp. cream of tartar
1/4 c. water	

Combine all ingredients in a saucepan and boil to 260°F on candy thermometer or until syrup forms a hard ball in cold water (not ice water). Immediately pour on a lightly buttered platter or tray. As it cools, fold edges to the center, being careful not to "mix" taffy. This is done to prevent the outer part becoming too hard, and to keep the whole mass at an even temperature and consistency.

Allow taffy to cool until it can be handled and until a dent will remain when taffy is pressed in with a finger. Butter fingers lightly and pull taffy until it becomes very light in color. Stretch and twist into a rope, then cut in 1 1/2-inch pieces with scissors. Wrap each piece in waxed paper. This candy retains a taffy-like texture and consistency for about 2 hours. If it is stored for a longer time, it will soften to the texture and consistency of a soft mint.

IN THE KITCHEN

Danish Pastry

*is a pastry perfect treat
you'll serve proudly*

by GWEN LESLIE

EVEN those who only eat to live often stand a bit in awe of the accomplished pastry cook. Tender-crisp flaky pastry served warm and fresh deserves praise. Reading on, you'll be surprised how easily you can earn a pastry cook's reputation.

Rich Danish pastry is one of the awesome pastry treats which the creative cook will enjoy making. Don't be fooled by the lengthy look of the written instructions; very quick actions may take many words to describe.

Danish Pastry

1 lb. margarine	1/3 c. sugar
1 c. milk	1 tsp. salt
2 pkg. active dry yeast	2 eggs
1/2 c. warm water	5 c. sifted flour

Heat milk in a small saucepan to just below boiling point. Chill. Dissolve 2 teaspoons of the sugar in the warm water and sprinkle the yeast over top. Let stand 10 minutes, then stir well.

Cream $\frac{1}{4}$ lb. of the margarine with the remaining sugar and salt. Add eggs. Beat well. Stir in milk and yeast mixture. Mixture will have a curdled appearance until the flour is added.

Add flour half at a time. Mix just enough to moisten flour and form a soft dough. Mixing time is kept to a minimum because dough is worked further in later steps. Turn dough out on a lightly floured pastry board or canvas. For ease of handling, turn dough to lightly coat with flour. Keep pastry board lightly floured throughout rolling period. Brush excess flour from dough each time it is rolled.

Pat dough down in a 10" square. Fold all 4 sides to the center, turn dough over and pat down to an 8" square. Do not knead.

top of the folded dough. Fold the last side over top and press edges together firmly to seal in margarine.



Turn dough $\frac{1}{4}$ turn. Roll into a rectangle about 12" by 20". Fold again into thirds and press edges together. Let stand 5 minutes. The rolling should be smooth and even to form unbroken alternate layers of margarine and dough. Repeat this step twice again. If the kitchen is hot, chill dough 5 to 10 minutes between each rolling.

Turn dough $\frac{1}{4}$ turn and roll into a rectangle about 10" by 15". Cut into 3 sections 5" by 10" each. Wrap in waxed paper and chill in the refrigerator 1 hour or overnight.

While dough chills, prepare desired fillings and toppings.

Fillings and Toppings

Prune Filling: Stir together $\frac{1}{2}$ c. finely chopped cooked prunes, 3 T. sugar and 1 tsp. grated orange rind.

Date Filling: Mix $\frac{1}{4}$ c. sugar and 1 T. cornstarch in a small saucepan. Stir in $\frac{1}{3}$ c. water and $\frac{1}{2}$ c. finely chopped pitted dates. Cook, stirring constantly, until thickened. Reduce heat and cook 5 minutes longer. Add 1 tsp. lemon juice and cool.

Pecan Cream Filling: Cream together $\frac{1}{4}$ c. margarine, $1\frac{1}{4}$ c. sifted icing sugar, and 1 T. flour. Beat in 1 egg yolk. Add $\frac{1}{4}$ c. finely chopped pecans.

Jams, Jellies, Preserves: Any of these make easy flavorful fillings or toppings.

Egg White Glaze: Mix 1 egg white with 2 T. water. Stir with a fork. Brush over top of all rolls just after shaping.

Frosting: Combine 4 c. sifted icing sugar, 1 tsp. vanilla, and $\frac{1}{3}$ c. water.

Horseshoe Rolls

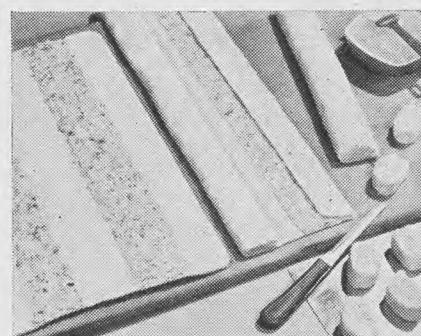
$\frac{1}{2}$ recipe Danish pastry dough	$\frac{1}{2}$ recipe Pecan Cream Filling
Egg White Glaze	(about $\frac{1}{3}$ cup)
Frosting	

Roll chilled dough into a rectangle 12" by 20". Spread pecan cream filling



Swift & Co. photos

on dough in 2 long strips about 2 $\frac{1}{2}$ " by 20", leaving equal strips free along both sides and center. Fold each outer edge halfway over its near strip of filling, then fold again so that the folds nearly meet in the center. Moisten surface with water. Fold again and press down firmly. This forms a 20" strip with 6 layers of dough. Cut in 1" slices and place cut side up, 2" apart, on a baking sheet. Brush all surfaces with Egg White Glaze.

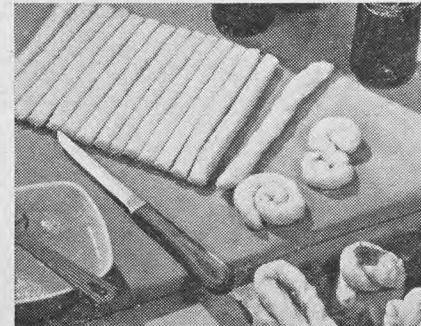


Let rise 1 hour in a warm room, 75° to 80°F and free from drafts. Danish Pastry will be flakier if not permitted to double in bulk. Bake in a moderate oven at 350°F for 10 to 15 minutes or until lightly browned. Brush with frosting and cool on a rack.

Fruit Topped Twists

$\frac{1}{2}$ recipe Danish Pastry	$\frac{1}{2}$ recipe Egg White Glaze
Jam, Jelly, or Preserves	Frosting

Roll chilled dough into a rectangle about 12" by 7". Cut 18 to 20 strips 7" long. Twist ends of each strip in opposite directions. Form on a baking sheet into snails, figure eights, horseshoes and pretzels. Tuck loose ends under roll. Brush surface with glaze. Let rise 1 hour, free from drafts, at 75° to 80°F. Make a depression in each roll. Fill with a teaspoon of jam, jelly or preserves. Bake in a moderate oven at 350°F for 10 to 15 minutes, until lightly

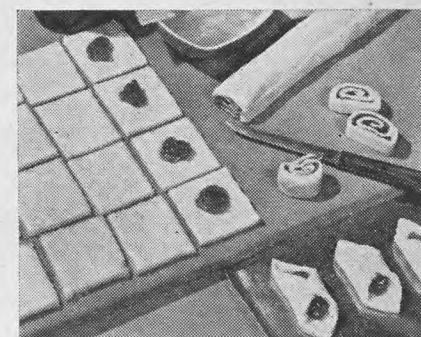


brown. Brush with frosting and cool on a rack.

Fruit Filled Pockets

$\frac{1}{2}$ recipe Danish Pastry	Egg White Glaze
Prune, Date or Pecan	Frosting
Cream Filling	

Roll chilled dough into a rectangle about 12" by 16". Cut into 24 squares. Put 1 to 2 teaspoons filling in the center of each square. Fold two opposite corners to center and press firmly to seal. Place on baking sheet 2" apart. Brush with glaze. Let rise 1 hour in a room at 75° to 80°F, free from drafts. Bake in a moderate oven at 350°F for 10 to 15 minutes, until lightly browned. Brush with frosting.



Date Pinwheels

$\frac{1}{2}$ recipe Danish Pastry	Egg White Glaze
Date Filling	Frosting

Roll chilled dough into a rectangle about 9" by 12". Cover surface with date filling, leaving a $\frac{1}{2}$ " strip free along one 12" side. Dampen free edge with water. Roll from opposite side toward dampened edge. Press edge to seal. Rotate roll gently on pastry board or cloth to make it round and smooth. Cut in 1" slices. Place cut side up on baking sheet. Brush with egg white glaze. Let rise for 1 hour in a room at 75° to 80°F, free from drafts.

Bake in a moderate oven at 350°F for 10 to 15 minutes, or until lightly browned. Brush with frosting and cool on a rack.

Storage

Store Danish pastry in a covered container or plastic bag. Use within 1 or 2 days. To freshen and warm rolls, place on a baking sheet in a moderate oven at 350° for 5 minutes.

Danish pastry may be frozen. Wrap pastries tightly in aluminum foil. Thaw and warm, in a moderate oven at 350°F, allowing 10 to 15 minutes before serving.

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5. Contestants must be 21 years of age or over to qualify for prizes.
6. Only one entry per family.
7. Employees of Vactric (Canada) Limited, their advertising agency, and their immediate families are not eligible.
8. All entries become the property of Vactric (Canada) Limited, 1835 St. Catherine St. W., Montreal, P.Q.
9. The decision of the judges will be final.

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Memories at Twilight

by VIOLA PHILLIPS

THE sun hung suspended on the western horizon in a mixture of orange, yellow and red as I drove around the curve. Another deserted, dilapidated farmhouse came into view. The sun's golden rays were reflected on the west window, the only light now known to its stained and broken panes.

The small house sat on a lonely knoll. The gay blooms of yesteryear's summer flowers were no more. Instead, a miniature forest of wild weeds surrounded the house foundation and overflowed the yard.

Where once stood a straight stack, the chimney leaned as if it were ready to topple with the first breath of wind. Once a gay ribbon of smoke trailed from it, to paint a gray plume against the blue sky on cold, frosty winter mornings.

I knew the happy young couple who once lived in the little forgotten house. They had worked hard in the fields to build their home. A little girl and a brown collie dog once romped around the farmyard from morning until night, winter and summer. Later, two sons completed the family circle. Each one of them made pets of ponies and goats, chickens and cats. The children shared such daily chores as gathering wood and bringing the cattle from the far pastures. They did these chores after they got home from the country school more than two miles away.

As the little girl grew up she primped before the old-fashioned dresser. Sometimes she would peep out of that west window to see if a certain beau was driving over the hill in the old model car to take her to the Saturday night movie in town.

As I sat in the car and reminisced about those never-to-be-forgotten days, I remembered it all. As many other farmers have done in recent years, the couple has since moved into town. Two of the children are married and have their own homes.

Night mist wraps the house in gloom. Day is done and life for the little farmhouse is done. Yesterday is gone, never to be relived. But the memories remain. They are happy memories of days long ago when I lived in that now deserted farmhouse with my parents and brothers. V

Spring's Harbinger

Warming my room with their radiant bloom
When frosty winds blow chill,
Cheer to me brings the colorful row
Where scarlet geraniums richly glow
Upon my kitchen sill.

Geraniums are prime in the wintry clime,
But, O when springtime's due
Nothing so joyously fills the place
As branching forsythia's flow'ring grace
In a bowl of wedgwood blue.

—F. ELEANOR NICHOLS.

More than candles make a cake

Birthday Special



WHEN the family birthdays come around, give some thought to the birthday cake you make. For example, if there is a Girl Guide or Boy Scout in the family, ice the cake in his or her favorite color and then write "Happy Birthday" on it in a contrasting color. Scout or Guide emblems can be made with icing of the same color. If there is a horse lover in the family, decorate the cake by grouping a few of the

little plastic horses all dime stores carry on top of it. If you want to go even farther, make a corral fence with stick-candy. Birthdays are special days and everyone likes to feel they are getting special attention on their natal day. It really isn't much work, or expense, to make an individual-looking cake. These are the kind of things that youngsters, in particular, remember for a long time.—L.P.B. V

How Charming Are You?

WHY are some young people more charming than others? It isn't so much a question of how a person looks. It is, instead, a matter of how that person thinks and acts. To help you find how you stack up on charm, here's a quiz for you.

	Yes	No
1. When you are talking with a person, do you look into his or her eyes?	<input type="checkbox"/>	<input type="checkbox"/>
2. Are you as polite and gracious to a sales clerk or waitress as you are to your close friends?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do new situations frighten you?	<input type="checkbox"/>	<input type="checkbox"/>
4. Do you usually get as much sleep as you require?	<input type="checkbox"/>	<input type="checkbox"/>
5. Are you easily offended?	<input type="checkbox"/>	<input type="checkbox"/>
6. Can you stand or sit without slouching, squirming, shuffling your feet or drumming with your fingers?	<input type="checkbox"/>	<input type="checkbox"/>
7. Do you use some phrase, such as "thank you" or "how kind of you" when someone pays you a compliment?	<input type="checkbox"/>	<input type="checkbox"/>
8. Are you amused when someone else gets into an embarrassing situation?	<input type="checkbox"/>	<input type="checkbox"/>
9. Is it easy for you to smile, even at strangers?	<input type="checkbox"/>	<input type="checkbox"/>
10. Are you <i>sincerely</i> concerned about the well-being and comfort of others?	<input type="checkbox"/>	<input type="checkbox"/>
11. Do you always try to have the "well-scrubbed" look (hair, nails, teeth, skin, clothing)?	<input type="checkbox"/>	<input type="checkbox"/>
12. Are your conversation and letters filled with pronouns that refer to yourself, such as I, me, we, mine, and ours rather than such pronouns as he, she, theirs, yours, you?	<input type="checkbox"/>	<input type="checkbox"/>
13. Do you dislike the idea of growing old?	<input type="checkbox"/>	<input type="checkbox"/>
14. Do you feel that good manners are for sissies and are, basically, a lot of bother and nonsense?	<input type="checkbox"/>	<input type="checkbox"/>
15. Do you make a conscientious effort to keep your voice low and to enunciate clearly?	<input type="checkbox"/>	<input type="checkbox"/>
16. Do you secretly distrust strangers or feel that people of other races, nationalities or religious beliefs are not to be trusted?	<input type="checkbox"/>	<input type="checkbox"/>
17. When you talk with someone, do you give him or her your undivided attention?	<input type="checkbox"/>	<input type="checkbox"/>
18. Do you usually feel at ease with members of the opposite sex?	<input type="checkbox"/>	<input type="checkbox"/>
19. In a situation where there are older people, do you make a point of talking with them?	<input type="checkbox"/>	<input type="checkbox"/>
20. Do you try to develop your own personality instead of copying someone else?	<input type="checkbox"/>	<input type="checkbox"/>

Scoring: The answers to questions 1, 2, 4, 6, 7, 9, 10, 11, 14, 15, 17, 18, 19 and 20 are "yes". Those to questions 3, 5, 8, 12, 13 and 16 are "no". If you don't understand the reason for these answers, let us know and we'll try to explain.

Rating: 16-20 correct answers: You have learned the importance of living "outside yourself" which is the real key to charm. You have many friends and more admirers than you probably realize. Don't let this go to your head, however, for an egotist is very *un*-charming.

11-15 correct answers: You are a delightful person with a few insecurities. Don't let life and other people frighten you. Open up and let others know the real you.

6-10 correct answers: You suffer a great deal in many sorts of situations. Start with yourself, your grooming, posture, voice. Put on a big smile and try to make someone happy each day for the next week. Take it from there.

1-5 correct answers: Make a list of things you like about yourself, and, if you can, talk over your answers to this quiz with someone you respect—a friend, your parents, your minister or your teacher.

4-H Roundup

Manitoba

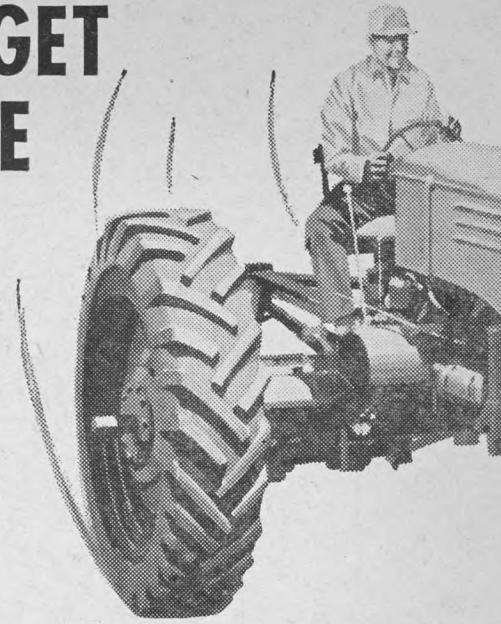
Manitoba has six 4-H clubs in its northern community at Norway House. They include 4 clothing clubs with 39 members and 2 garden clubs with 53 members. These members come from the scattered Indian settlements of this lake and forest district.

The clubs started late in 1958. They have two basic aims: to encourage the girls' sewing skills; and to encourage vegetable growing as a means of improving family diets.

The Garden Club members began by planting seed potatoes which were donated by friends in the southern part of the province. Their plots

(Please turn to page 96)

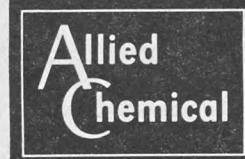
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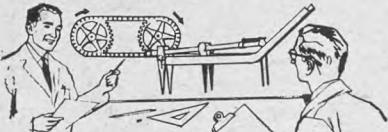
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feeder bar with aluminum tines retracts in normal windrows, extends in heavy ones—takes any windrow in stride! Virtually clog-proof!

NEW HOLLAND
"First in Grassland Farming"

(Continued from page 95)

ranged from 50 square feet to an acre in size. Many members had to break the ground by spade and fork before the potatoes could be planted. Then they fenced their plots to keep wandering horses out. This year the garden clubs plan to grow potatoes, turnips, carrots and beets.

Sewing supplies for the clothing clubs were provided by church groups in other districts. In the 4-H tradition, Souris Poultry Club adopted the Norway House clubs and donated a pedal sewing machine and other sewing needs as its special project.

Another development in Manitoba is the formation of a pilot 4-H sheep club in the southeastern corner of the province. It has 12 members and began its club project with four cross-bred ewes for each member.

Ontario

Ontario now has Canada's first 4-H tobacco club. While its members are not asked to plant and harvest a tobacco plot on their home farm, they have meetings to discuss such topics as greenhouse management, soils, fertilizers and crop rotations. They also complete a financial statement on the cost of growing an acre of tobacco and submit a detailed crop report.

Members give a 5-minute oral re-

port on their experiences with the crop during the season. At their achievement day, they exhibited two hands of leaf tobacco, judged a tobacco class and wrote an exam on the year's work.

New Brunswick

Enthusiasm and hard work in abundance are to be found among the 22 members of the St. Irene Garden Club. Organized in 1958, this club has already won honors in inter-club competition.

One of its special projects was a field day which featured the pruning of balsam firs for market, preparation of trees for shipment and general woodlot management.

In another project members planted 2,000 strawberry plants. They tended the plants and put the money realized from berry sales into the club account. Each member also devoted an entire day to blueberry picking and the money collected in this way pushed the club account still higher.

The club's program so impressed one community resident that he donated a garden tractor to the group. With this gift, and much helpful advice from its 3-member advisory committee, this 4-H club seems destined for a successful career.

Continued from page 9

ROYAL ROAD

prices adjust gradually to changes in output and consumption. The other is to estimate what prices for the next production period will be, to announce the support level in advance on this basis, and to implement the guarantee by a system of deficiency payments.

The first method can be administered by a storage program when supplies are heavy and a release from storage when the flow to market is light. It is feasible only for storable products such as grains, wool, butter and eggs. The deficiency payment method is necessary to stabilize prices for perishable products. Both methods have been used under various Canadian programs and would work reasonably well if they were administered in such a way as to stabilize prices about their trends.

Programs in Trouble

Both programs have run into trouble when they have been used to hold prices above their trend levels in an effort to halt persistent declines in farm prices. The storage program had to be abandoned for eggs, hogs and skim milk powder because storage stocks became unmanageable. Deficiency payments permit the continuation of the guaranteed support level without the accumulation of surpluses.

So far, deficiency payments have resulted in unstable egg prices. One reason for this apparent failure is that they haven't yet had time to prove their effectiveness. They will probably work fairly well once producers adjust to the new system. Another reason they have brought greater instability is that they are not being used primarily to stabilize farm prices but to protect the small flock owner from the

effects of technological changes in agriculture. By removing the bulk of support from large producers, the program has exposed these producers to much greater price uncertainty. This may cause considerable instability in the industry until producers adjust to the new situation.

Farm prices can be effectively stabilized about their trends by one of these two methods at a moderate cost to the taxpayer. Consumers benefit as well as producers, because the programs help to insure a steadier flow of products to consumers at a more stable price. In general, deficiency payments will be the more costly of the two since all payments made are a non-recoverable drain on tax revenue. Under storage programs, which are not designed to hold prices above their trend levels, most, or all, of the purchase price is recovered when the products are sold.

Price stabilization would not be easy to insure for all farm products. It could be fairly costly for perishable products for which deficiency payments may be the only feasible method. The achievement of this objective would, however, be simple compared with the much more formidable objective of maintaining a fair relationship between farm prices and the prices of non-farm products.

The Cost-Price Squeeze

NEITHER storage programs nor deficiency payment programs are capable of maintaining farm prices indefinitely at a level significantly above the prices that would exist in a free market. A policy powerful enough to halt or reverse the cost-price squeeze must attack the *causes* of depressed farm prices rather than the prices themselves which are only *symptoms* of the conditions causing the squeeze. An attack on the symptoms may actually aggravate the problem by

(Please turn to page 98)

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(Continued from page 96)

delaying the adoption of policies that could bring lasting results.

The notion that price supports can overcome the cost-price squeeze appears to be based on a faulty diagnosis of the economic situation in agriculture today. The squeeze is not the result of a temporary or minor imbalance in the farm economy that can be adjusted with the help of price stabilization policies. It is, rather, the result of powerful economic forces that cannot be offset permanently by purchase and storage programs or by deficiency payments.

One major cause of persistent de-

clines in the relative level of farm prices is the rapid advance in farm technology that is raising our capacity to produce food faster than the market can absorb it at a steady price level. On the other hand, the growth in farm markets is limited to the increase in our population since we are making very little progress in expanding agricultural exports. As a result, the pressure of increased capacity to produce is depressing farm price levels while other prices continue to rise.

No policy of price supports, deficiency payments, 2-price systems, marketing boards or production under contract can raise farm prices sig-

nificantly for very long without involving prohibitive costs or unmanageable surpluses. This is because any price held very long above the free market level will bring forth such an increase in output that the program will break down. Even limiting deficiency payments to a modest level of output per farmer will overcome this difficulty only temporarily and partially.

Such a policy solves the cost-price squeeze only for the small diversified producer and only in the short run. It leaves the specialized producer, whose income may be just as low, at a considerable disadvantage compared with his neighbor who may get deficiency payments on two or three products. It forces specialized producers to compete with subsidized production of their neighbors, thus taxing their efforts to operate more efficiently.

Deficiency payments on a limited output will not even protect the small producer from the cost-price squeeze for long. Technological advances will continue to the point where large scale production without subsidy will be more profitable than small scale production with deficiency payments. Production will continue to shift to a more specialized basis and an increasing proportion of output will be left without protection from the cost-price squeeze.

Production Control

IF the objective is to halt the relative decline in farm prices, to all farmers, permanently, then there are only two ways of doing it: (1) by controlling the output of the product, or (2) by expanding the market for it. A large supply undoubtedly tends to depress the price of a product. The price can be raised by reducing the supply. Prices can be held in line with costs and the cost-price squeeze eliminated by limiting output to the amount that can be sold at the price required to maintain this relationship.

Many other industries are able to limit output in this way. In fact, they are assisted by the government in doing so by tariff protection which protects such industries from foreign competition. Farmers cannot individually control output because, even if the individual farmer stops producing altogether, he does not affect price in the slightest. Even a group of farmers cannot control production voluntarily because other farmers would expand their output and every member of the group would have a strong incentive to break the agreement at the expense of his neighbors.

To be effective in raising prices, production control would have to be made compulsory and be imposed by government authority. Producer marketing boards could not do it unless backed by government authority to impose quotas on all producers. The government would not, and probably could not, impose such a program on agriculture unless a substantial majority of producers favored it and were willing to support it in practice.

A program of supply control could be an answer to the farmer's dream—stable farm prices at a level high enough to ensure a reasonable level of income to producers operating on a moderate scale at an average level of efficiency. It would not do the same for inefficient producers nor for those operating on too small a scale. No price program could ever do that.

Costs of Supply Control

Supply control could bring about a golden age of agriculture but it would not be a royal road to parity. Every policy has its costs and disadvantages which must be balanced against the potential benefits when we make a choice between alternative policies. Some of the costs and problems in supply control are:

1. Supply control would restrict the freedom of producers to make their own decisions. It would require the acceptance of complex and restrictive controls in the form of marketing quotas for each producer.

2. Higher food prices to consumers would create a real hardship in some cases for lower income people. Food is essential to life. If higher prices are charged for food we can cause much more serious welfare problems than are caused by high prices for TV sets, motor boats or cars. If food prices were raised significantly by supply control, it might be necessary to subsidize food prices for low income people.

3. There is a moral cost involved in deliberately restricting the production of food in a world in which over half the population is poorly fed. Nations, such as Canada, which are rich in agricultural resources might find it uncomfortable for their consciences as well as politically dangerous for their

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You'll like the fast, smooth way that Hesston chops and spreads your straw without slugging. It eliminates bunching and lets the straw settle down through stubble for easier plowing... Cuts down on disking, too. Hesston solves tough straw problems in small grains, soybeans, flax, and a wide variety of other crops. A time-proven Hesston Straw Chopper will pay for itself over and over again in labor savings and better soil.

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future security to restrict food production.

Market Expansion

RECOGNITION of these costs does not imply the rejection of supply control as a desirable policy. It does, however, focus attention on the other major policy alternative — to increase the consumption of food rather than to limit its production. Market expansion would be more difficult to achieve and would not be as effective as supply control in holding farm prices in line with costs. If market expansion did raise prices, output would still increase and effectively limit that rise.

The possibilities for market expansion lie mainly beyond our borders. World food needs are practically unlimited but the problem is to find ways and means for filling these needs. Some possible avenues that have not yet been implemented include: (1) a policy of free trade for Canada, (2) export subsidies, (3) gifts of food, and (4) international surplus disposal programs.

Each of these policies also have their costs. Free trade would mean a lower level of protection for many Canadian industries. Export subsidies and give-away programs would require heavier taxes or the diversion of present government expenditures from other uses. It can be argued that \$200 million a year spent on feeding hungry people would do more for our future security and economic prosperity than the same amount spent on armaments. The public and our legislators must be convinced of this, however, before such changes can be made. The prospects do not appear bright for getting international co-operation for surplus food disposal policies.

The difficulties in achieving market expansion do not detract from its economic and social merits. In addition, such a policy would not raise consumer prices to the same degree and it would enlarge, rather than restrict, the freedom of producers. Moreover, it might be just as difficult politically to secure a supply control program.

These are the two broad policy alternatives available for moderating or eliminating the cost-price squeeze. The price and marketing policies currently in use can be effective only in stabilizing prices about their trends. Only to a minor degree and for a limited time can they raise prices above their free market levels. If the objective is to raise prices above their currently depressed levels the prescription must be to produce less or consume more.

This requires a choice between two major alternatives, both of which involve costs. The costs and the potential benefits of each type of policy must be judged in making the choice. Farmers and the other groups in society must choose one type of policy or the other or some combination of the two or, as at present, do virtually nothing of a permanent nature about the cost-price squeeze in agriculture. ✓



Iron horse out to pasture

When this steam tractor first trundled into the fields, it was the last word in farm mechanization.

Now it is honourably retired . . . out to pasture.

Old equipment just isn't good enough, modernization is the key to progress. The manufacturing industries, with their promise of greater security and perhaps more money for less work, have tapped your labour resources. Men have left the land, lured away by the bright city lights. The country has more mouths to feed . . . and you have less hands to work with!

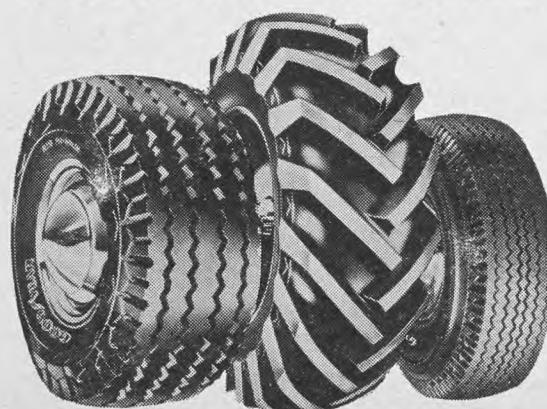
How do you overcome a shortage of labour? By mechanization. By a willingness to test new ideas. New ideas . . . new

methods . . . sometimes you have to take a chance. But there are many things you refuse to gamble with. When you invest in equipment, you can't afford to take a chance on quality. You know that second best is no bargain.

Past experience is still one of the most reliable guides to the best buy. Perhaps this is why most farmers in Canada prefer to buy Goodyear tires . . . past performance has proved their value.

It is a matter of simple fact that more tractors and equipment . . . more trucks . . . more cars . . . ride on Goodyear tires than on any other kind. When you need tires, see your Goodyear dealer, be sure of the quality you know you need.

For trucks...tractors...cars



**There is a difference
in tires**



What Farm Organizations Are Doing

(Continued from page 11)

OFU MEETS ONTARIO GOVERNMENT

The Ontario Farmers' Union, in its annual presentation to the Cabinet Ministers of the Ontario Government, stated that a sound agricultural program must include:

- Adequate credit facilities covering long, intermediate and short-term needs of farmers.
- A sound crop insurance plan so that producers are not completely at the mercy of the elements.

• A conservation plan which permits farmers to direct their production to those crops for which their land and other facilities are best suited.

• Adequate marketing legislation which enables producer-controlled marketing boards to bargain for the best possible price for farm produce.

• A realistic price support system which would ensure producers a price bearing a fair relationship to production costs, at least on the requirements of the domestic market.

The OFU emphasized the farm problem is so complex that if any one

part of this five-point program is not implemented, the problem will remain unsolved.

The OFU also made special reference to the controversial hog marketing situation. It charged that "the undemocratic actions and unfavorable publicity associated with the present Hog Marketing Board, endangers the operation of other more successful marketing plans and has seriously retarded development of a national meat marketing council." The brief stated that a plan proposed by the OFU, which would permit the Hog Marketing Board to sell hogs while still in producers' pens for shipment direct to packers, and thus to avoid the use of assembly yards, has not been seriously considered by the Board. The OFU also accused the Hog Board of showing preference for factory-type farmers by refusing to accept a price support program which would limit the amount of assistance provided to each producer. The Union stated that it would endeavor to have the present Hog Marketing Board replaced by a more democratic and effective one.

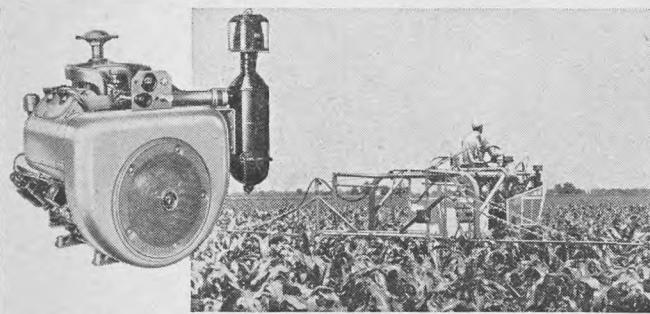
The OFU brief contained specific requests for: expanded health insurance benefits; compulsory automobile insurance; increased trade promotional activities by the Ontario Government; a ban on Daylight Saving Time or at least a uniform date for all communities to revert to Standard Time; an equitable milk pooling program; gov-

ernment testing and grading of milk and cream; reduced license fees for farm trucks; regulations to require consignors' names to be announced at community auction sales; cheaper freight rates on fertilizer shipped to northern Ontario; government maintenance of highway fences, and a committee of the Legislature to study crop insurance legislation. V

IFUC PETITIONS TRANSPORT BOARD

The Interprovincial Farm Union Council, in a brief to the Board of Transport Commissioners, claimed that present freight rates on rapeseed are unrealistic and discriminatory. It requested the establishment of an export freight rate for rapeseed comparable to that of other grains.

The IFUC pointed out that due to export demands, rapeseed was readily accepted by farmers as an alternative cash crop for wheat. At the same time, the Council believed there are tremendous possibilities for expansion of the Canadian market for rapeseed oil. It argued that rapeseed oil matches the qualities of soybean oil, the large bulk of which is now derived in Canada from soybeans imported from the United States. The ability of rapeseed to compete successfully, the IFUC said, depends on the price realized by the producer. In this regard, freight rates are a determining factor. V



New HAHN HI-BOY Model 300 Self-propelled High-clearance Sprayer, made by Hahn, Inc., Evansville, Ind., provides most effective insect and weed control for corn growers, cotton and tobacco farmers. A 30 hp VH4D Wisconsin Engine supplies dependable power.

*spray up to 200 acres per day
—save 2/3 on your haying costs...*



New HESSTON 220 Self-propelled Windrower and Hay Conditioner, made by Hesston Mfg. Co., Hesston, Kas., cuts, conditions, and windrows up to 80 acres of hay a day. A one-man, 3-in-1 machine. Powered by 37 hp. Model VG4D Wisconsin Engine.

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What's Happening

(Continued from page 8)

These and other proposed amendments contained in Bill 86 are causing a considerable stir.

Ontario hog producers, in particular, have come out at a public meeting and condemned the proposed amendments, suggesting that they were introduced to curb their activities and were undemocratic. The Ontario Hog Producers Marketing Board at its annual meeting passed a strongly worded resolution asking that Bill 86 be withdrawn. The hog producers also called on delegates to make personal visits to their elected representatives requesting the Bill be withdrawn.

The apparent reaction was for the members of the Ontario Government to vote solidly to retain the amendments, when the question of withdrawing the Bill came up in the Legislature on March 15. Liberals

and CCF members voted against them. The vote came after a stormy 4-hour debate. The Bill is still to be presented for second reading at time of writing.

The Ontario Federation of Agriculture planned to ask Agriculture Minister Goodfellow to withdraw Bill 86, or else reword its amendments to the farm products marketing legislation in a way that will prevent weakening or limiting the powers of local producer boards and agencies. V

NFU PRESIDENT CALLS FOR FEDERATION

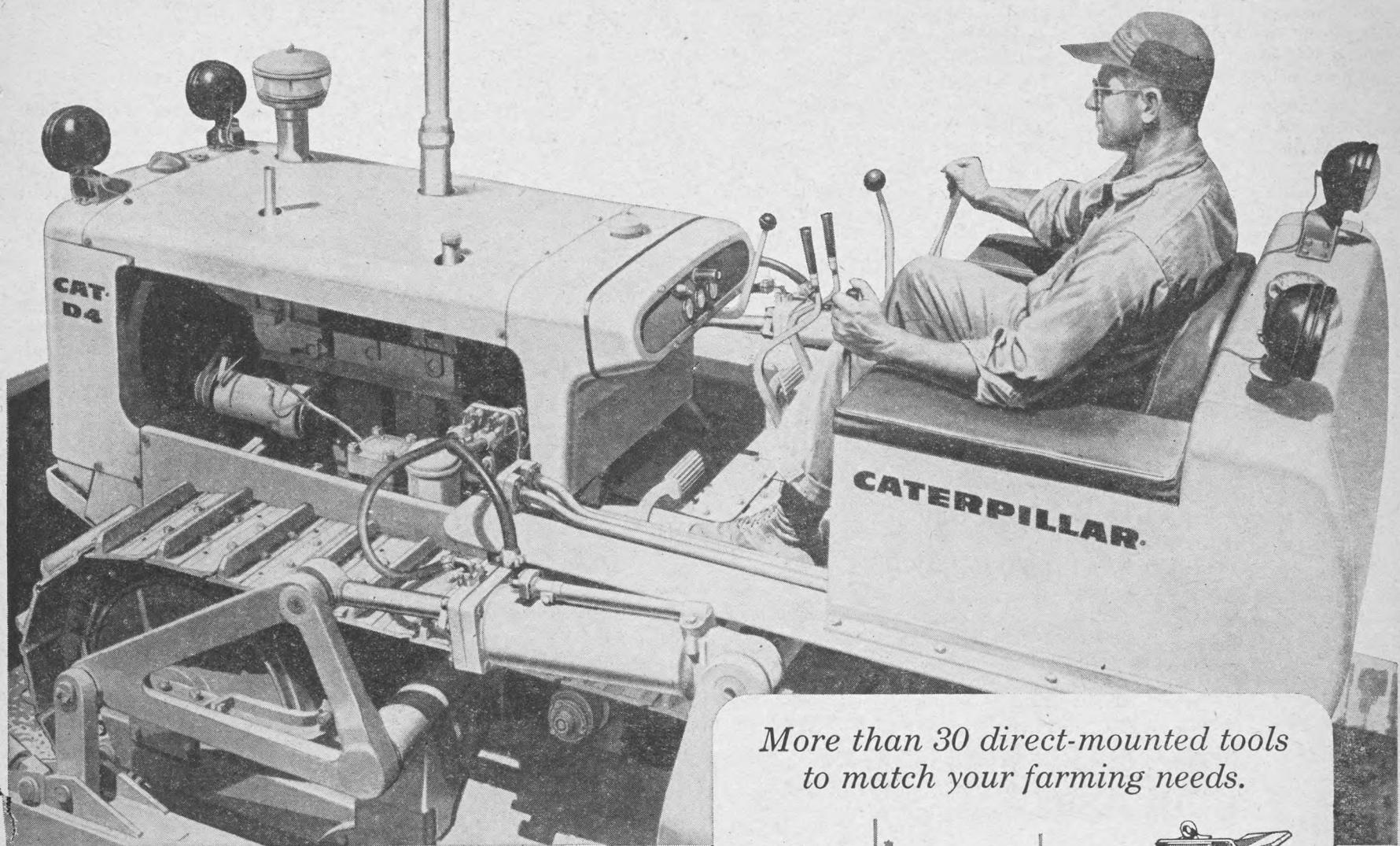
James G. Patton, who has been president of the National Farmers' Union of the United States for 20 years, told delegates at his organization's annual meeting last month that the time had come for farmers to

(Please turn to page 102)



1960 Executive of the Poultry Products Institute of Canada: (Front—l. to r.) R. D. Sterling, Vancouver; President D. Shaver, Galt; W. G. Sharpe, Regina. (Back—l. to r.) J. de Broin and Secretary S. L. Rodway, Toronto; R. A. Blair, Toronto. Member E. R. Hoover, Burlington, Ont., was not present for picture.

NEW 65 HP CAT D4 TRACTOR



The versatile D4 now gives you "big tractor" power and response!

You get more "snap" with a new Caterpillar Diesel Engine: 25% more torque rise under load—65 HP at flywheel, 52 HP at drawbar.

You do more work with the aid of better visibility, more convenient controls and the new fast forward-reverse lever—exclusive in this size tractor. 5 speeds forward, 4 reverse.

You start easier, faster with recoil starter and single-lever control of engagement. Electric starting (direct or auxiliary) is available.

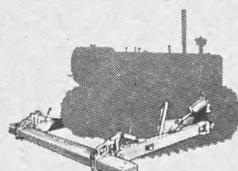
You save on servicing. Track rollers and idlers are lifetime lubricated; no further lubrication is needed until rebuilding. Dry-type air cleaner never needs oil, yet it removes 99.8% of dust from air entering diesel.

You also gain the convenience of a new hydraulic control (available as an attachment) which leaves front and rear of tractor open for mounting optional equipment. See your Caterpillar Dealer for complete information.

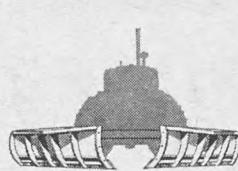
CATERPILLAR

Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

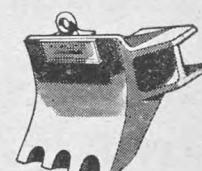
More than 30 direct-mounted tools to match your farming needs.



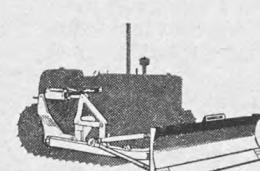
"SWING-AROUND" TOOL BAR carries front or rear mounted tools.



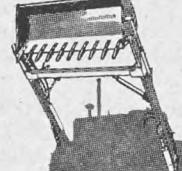
DUAL BLADE is adjustable for grading and border-making.



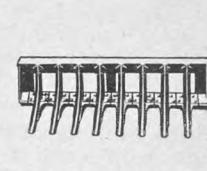
FLECO-BUILT DETACHABLE STUMP-ER for low-cost stump removal.



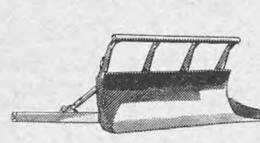
ANGLING BULLDOZER casts material to side or straight ahead.



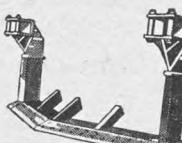
BALDERSON-BUILT LOADER utilizes draft arms of Cat Tool Bar.



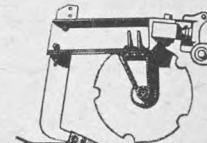
FLECO-BUILT RAKES clear land, leave soil in place.



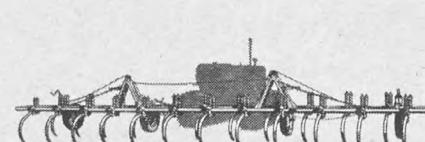
ROME-BUILT K/G BLADE splits trees, shears stumps at base.



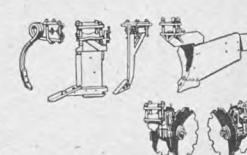
TOOL BAR ROOT PLOW cuts brush below ground level.



FLECO-BUILT SUB-TILLAGE TOOLS for deep cultivation.



Developed expressly for Canadian farms:
Anderson-built flexible tool bar cultivator.



Other Tool Bar Tools: Cultivator
• Subsoiler • Chisels • Ditcher •
Disc Ridger.

What's Happening

(Continued from page 100)

insist that their organizations form a federation of agriculture.

Referring to the experiences of the last several years, Mr. Patton called them "a period of frustration." The big problem facing us, he said, is to "clean up the wreckage."

"During the '60's," Mr. Patton asserted, "the Farmers' Union and like-minded people in America must make an all-out fight for the establishment once and for all of a land policy which will give decided encouragement to the family farmer. It seems to me that the time is coming when the farmers of the United States must insist that their respective organizations form a federation of agriculture for the purpose of giving to the American farmer a maximum amount of bargaining power in the market place of ideas in Washington, in the state capitals and in the world, where the farmer will be dealing more and more."

Mr. Patton is currently president of the International Federation of Agricultural Producers.

MARGARINE BILL DEFEATED

Once again a bill introduced in the Manitoba Legislature to repeal the ban on coloring margarine yellow has been defeated. The vote, which was an open one (not on a political party basis), was 28 to 27, with the Speaker casting the deciding vote.

PRIME MINISTER REJECTS GRAIN PAYMENTS

Addressing the House of Commons on March 4, Prime Minister Diefenbaker turned down, for a second time, representations made by western farm organizations for deficiency payments on wheat, oats and barley grown on the Prairies during the 1955-56, 1956-57 and 1957-58 crop years.

The main reasons given by the Prime Minister for this stand may be summarized as follows:

1. Under the proposed deficiency payment program for grains, the greatest help would go to the people who need it least. Calculations showed that 86 per cent of the payments would go to 65 per cent of the larger farmers—or 35 per cent of the smaller farmers would receive only 14 per cent of such payments.

2. The proposed program does not provide aid to the farmer who has suffered a crop failure, and gives little aid to the mixed farmer and livestock raiser who markets limited amounts of wheat.

3. The proposed program would intensify the grain surplus problem.

The so-called "deficiency payments" for grain are not deficiency payments at all in the terms used in the Agricultural Stabilization Act, or in the support programs in various other countries. Under the Stabilization Act, a deficiency payment is the amount paid to a farmer to bring his return

up to the price guaranteed to him for the current year. It therefore involves the concept of forward pricing. The payments requested on wheat, oats and barley are retroactive flat payments rather than forward prices. What they amount to is a request to put into effect in Canada the same kind of fixed support prices which have been in effect in the United States and which have resulted in the piling up of such large surpluses.

4. The program would be too costly. In this connection the Prime Minister said: "All of us would like to be able to provide hundreds of millions of dollars, but I ask you, Mr. Chairman, what the situation would be if Parliament were to vote such an amount in respect of wheat, oats and barley produced during those years."

In discussing the cost, he also pointed out that the Government would be faced with extra costs of storage resulting from the program.

5. The proposed program could either lead to the United States excluding Canadian oats and barley exports, or placing a countervailing duty against them.

The Prime Minister concluded by saying that any proposal to augment the admitted income deficiency of western grain producers must be of such a nature that the bulk of the assistance provided is directed to those most in need of it. The fixed support type of deficiency payment, he said, is not the most equitable way of giving assistance during this period of adjustment while the national farm program begins to take hold and work for the farmer.

DANGER! MAN AT WORK



This sure was a busy line, when photographer Jim Rose caught eastern field editor Don Baron phoning a late report from Toronto for The Guide recently.

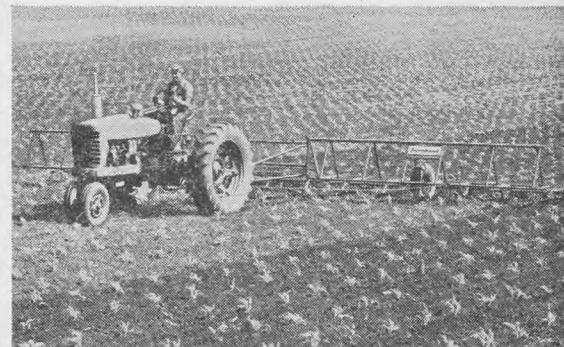
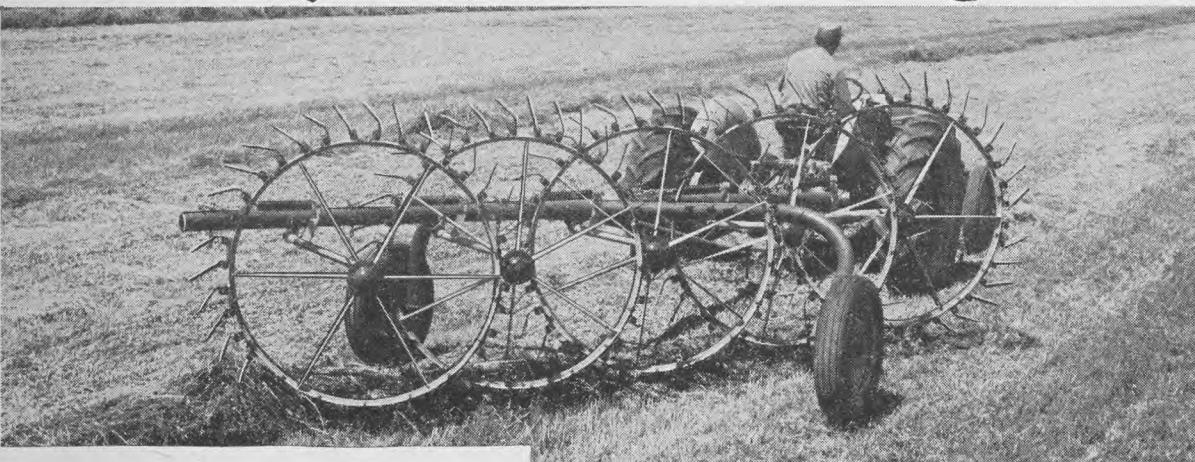
FLAX SITUATION REVIEWED

Speaking to the Barley and Oilseed Conference in Winnipeg, James McAnsh, of Merrill Lynch, Pierce, Fenner & Smith, Inc., Chicago, stated that for the short term, at least, a strong world market for flaxseed and linseed oil is probable. However he warned that there are danger signals that must not be ignored.

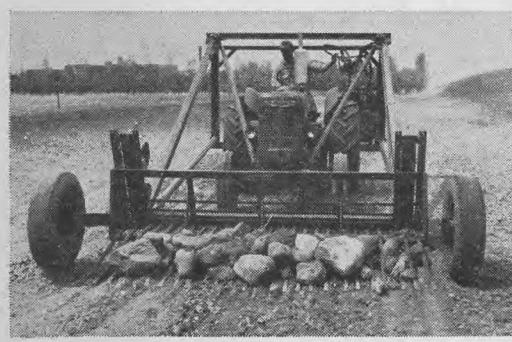
He suggested that Canadian flaxseed, because of what seemed to be a justifiable statistical picture, was priced out of the world market last fall and the surplus did not move.

He also pointed out that important changes in both production and con-

Farmhand...the low-cost answer to your farming problems!

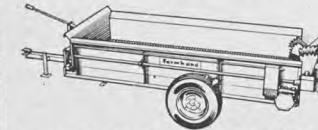


FOR BETTER SEED BEDS and the cleanest fields you've ever had, use the Harroweeder. It's both a harrow and cultivator. Special 11" coil spring teeth give proper penetration and exclusive "vibracoil" action. It obsoletes the drag harrow, rotary hoe, and cuts out at least 2 trips with tractor-mounted cultivator. Sizes and combinations available from 13' to 55'.



CLEAN FIELDS IN A HURRY with the unique Rock Picker attachment for Farmhand loaders. Teeth run just below the surface for efficient pick up. You can sweep an 8' swath, haul and dump rocks without leaving the tractor. And there'll be practically no maintenance costs.

FAST, GENTLE RAKING ON ANY KIND OF GROUND is the specialty of the Farmhand-Morrill Rake. Big diameter raking wheels hug the ground—rough or smooth—at tractor speeds up to 20 m.p.h. Simple design makes initial cost and maintenance low, makes operation easy. Models available for swaths from 6'9" to 10'5". Tandem and V-type arrangements available. The Farmhand-Morrill Rake is distributed in Quebec and Eastern Ontario up to highway 31 by Forano, Ltd.



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HANDLE MANURE FASTER with the Farmhand F-16 Loader. Mounts ahead of steering wheel so it doesn't interfere with getting on and off. Low cost puts this work-saver easily within reach of every tractor owner. Capacity—2,000 lbs.; reach 10-ft.; for both low and high pressure hydraulic systems.

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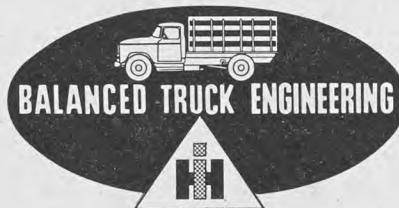


A truck is a combination of many complex components. Each component must be engineered to the highest standards of efficiency and endurance. All must be *balanced* to each other if the whole truck is to give year after year of reliable farm service.

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Balanced truck engineering begins on the drawing board. Through every step of production — from design and testing of individual components to the final assembly of the whole truck — the practical needs of the Canadian farm *truck* operator are kept constantly in mind.

Result? International Trucks are built to *work* and built to *last*—because they are built by truck men.

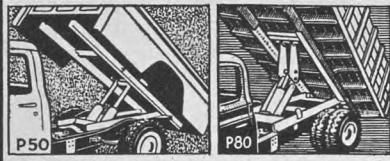


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E90 — Electric. **\$275.00**

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Hi FOLKS:

They say a change is as good as a rest, but Ted Corbett maintains things change so fast these days that nobody has a chance to rest.

"No matter what it is," he complained one day, "just as soon as you get used to a thing somebody will up and change it. A man hardly dares go to bed at night for fear he won't know where he is come morning."

"What's changed now?" I asked him.

"Our experimental farm, that's what!" he said indignantly. "Years ago it seems we started out with a couple of experimental farms. Then somebody, an ex-railroad man I'd say, decided to expand things by opening a bunch of experimental stations."

"Nothing very serious about that," said I.

"That ain't even the half of it," he continued. "Not long after, a farmer got hold of things again and back she came to experimental farm."

"And now you say it's changed again?"

"She's changed twice since then," he told me.

"In fact the farm and railroad influence see-sawed back and forth for awhile like the tussle over the Crow's Nest Pass freight rates. The next name

they decided on was Research Station. It was the scientific boys did that. They're always searching and researching for something."

"That what they call it now?" I read all their bulletins but I never pay much attention to the name.

"No sir, not by a long shot," he said. "They've got a real dandy one this time. Now it's Regional Research Institute."

"That's a mighty big title," I said, reaching for a pencil. "How do they spell it?"

"Who cares how they spell it," Ted grumbled. "The point is, when are they going to stop acting so ornery and settle down?"

"That's not being ornery," I told him. "It's just a matter of keeping up with the times. After all, Research Institute sounds a lot more dignified than Experimental Farm. A man adds dignity to his occupation when he can give it a fancy name."

Ted went away muttering and shaking his head, but I think the idea must've sunk in. Next time I passed he was taking down his old sign "Willow Creek Farm" and putting "Willow Creek Produce Factory" in its place.

Sincerely,
PETE WILLIAMS.



Would you spend 5 CENTS to prevent this?

Four or five cents a post is all it costs to make your fence posts last 3 to 5 times longer by simply treating the ground line with "Osmose Special Fence Post Mixture". Best of all, you do it yourself in minutes, even with posts taken from your own property—cedar, pine, spruce, willow, poplar. No one knows better than you, the time and hard work involved in renewing fence posts or poles. Now make them last 3 to 5 times as long with "Osmose"—the preservative that contains 5 proven industrial wood preservatives, each more powerful than creosote, tar or bluestone.

POLE-TYPE STRUCTURES

If you are sold on the economics of a pole-type barn, consider the added saving in treating the ground lines and joints yourself with extra effective "Osmose Special Fence Post Mixture".



Over 100 major power companies have "Osmose" treated more than 3,000,000 poles in Canada and U.S.



WOOD ABOVE THE GROUND
NEEDS PROTECTION TOO!
Doors, porches, barns, silos, anything made of wood can be damaged by moisture whether painted or not, causing rot, discoloration, warping or peeling. "Pentox" primer-sealer-wood preserver, applied to bare wood, seals the pores against moisture, saves paint, makes any wood last 3 to 5 times longer. "Pentox" also protects against termite attack.

AVAILABLE WHEREVER PAINT IS SOLD

Real Help Available for Domestic Diaper Dippers

No doubt about it, the diaper used to mean a terrible lot of work for the farm wife. (As if she didn't have enough to do!) But not any more; running hot and cold water in the farm house cut this chore down, just as dozens of other farm jobs have been made easier than ever, and farm living today happier than ever.

What's more, when the man comes into the house at night, there is just nothing like a hot shower to take the aches out of him. A hard day's work on the farm makes a man plain bone weary; hot water makes him cheerful and fit for human company again.

And wouldn't it make sense for him to have water piped to where he wants it, instead of having to haul it around?

Any homemaker on an electrified farm who wants better living and wants information on how to install running water and on modernization, can write to Emco, London, for free information.

Department CG7-4
Emco Limited,
London, Ontario

Please send me information about Duro Water Systems and Emco's OHI Budget Plan.

Name.....

Address.....

THE TILLERS

by JIM ZILVERBERG



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